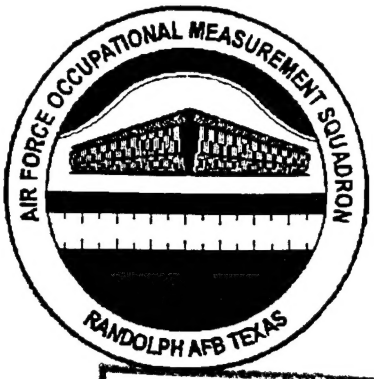

UNITED STATES
AIR FORCE

OCCUPATIONAL SURVEY REPORT

AEROSPACE PHYSIOLOGY

AFSC 4M0X1

AFPT 90-4M0-028

MARCH 1995

OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150-4449

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PREFACE

This report presents the results of an Air Force Occupational Survey of the Aerospace Physiology (AFSC 4M0X1) career ladder. Authority for conducting occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

1Lt Callie J. Molloy, Inventory Development Specialist, developed the survey instrument. Captain Ty K. Sills, Occupational Analyst, analyzed the data and wrote the final report. Ms Jeanie C. Guesman provided computer programming support, and Ms Sharon Slayton provided administrative support. Major Randall C. Agee, Chief, Airman Analysis Section, Occupational Measurement Squadron, reviewed and approved this report for release.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the Air Force Occupational Measurement Squadron, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph AFB, Texas, 78150-4449 (DSN 487-6623).

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SUMMARY OF RESULTS

1. *Survey Coverage*: The Aerospace Physiology (AFSC 4M0X1) career ladder incumbents were surveyed to obtain current task and equipment data for use in examining training programs. Survey results are based on responses from 359 members worldwide. All commands were proportionately represented.

2. *Career Ladder Structure*: Structure analysis identified one job cluster and seven independent jobs: Aerospace Physiology Technician job cluster, Entry-Level Aerospace Physiology Technician Independent job, Hyperbaric Chamber Equipment Maintenance Independent job, Hyperbaric Chamber Independent job, Research Chamber Independent job, Pressure Suit Independent job, Training Independent job, and Superintendent Independent job.

3. *Career Ladder Progression*: Personnel in the AFSC 4M0X1 career ladder follow a typical career progression pattern. Inexperienced personnel perform technical work in support of hypobaric chamber or pressure suit operations. More experienced personnel perform technical and training functions in support of these same operations, as well as some hyperbaric chamber support jobs. Experienced personnel perform mostly supervisory and managerial functions rather than technical tasks.

4. *Training Analysis*: A match of survey data to the draft AFSC 4M0X1 Specialty Training Standard (STS) identified numerous items not supported. Many unsupported items relate to performing spatial disorientation trainer maintenance and performing pressure suit activities. A similar match of data to the Plan of Instruction (POI) for the 3ABY4M031 course revealed fewer unsupported training objectives, many of which relate to emergency egress principles. Career ladder functional managers and training personnel should carefully review these nonsupported STS and POI entries to justify their continued inclusion in training documents.

5. *Job Satisfaction Analysis*: Overall, AFSC 4M0X1 members are as satisfied with their jobs as members of a comparative sample of medical career ladder personnel. Furthermore, members of the current sample are as satisfied with their jobs as the previous AFSC 4M0X1 (formerly AFSC 911X0) personnel surveyed in 1988. Job satisfaction data for members of specific career ladder jobs show that most job members are satisfied with their work. Only the Hypobaric Chamber Instructor and Research Chamber Job incumbents feel their talents are not being properly utilized and their work is not particularly interesting.

6. *Implications*: The current AFSC 4M0X1 career ladder job structure is similar to the job structure identified in the 1988 OSR. The AFM 36-2108 *Specialty Descriptions* accurately describe the jobs and tasks personnel at all skill levels perform, and job satisfaction is generally positive for identified jobs. The training documents analysis identified many unsupported STS items and POI learning objectives. Training personnel and career ladder functional managers should review these documents to ensure they are complete and appropriate.

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OCCUPATIONAL SURVEY REPORT (OSR)
AEROSPACE PHYSIOLOGY CAREER LADDER
AFSC 4M0X1

INTRODUCTION

This is an Air Force Occupational Measurement Squadron occupational survey report (OSR) of the Aerospace Physiology (AFSC 4M0X1) career ladder. This survey, completed in 1994, is intended to update the current data base and to identify any changes that may have taken place since the last survey in 1988.

Background

The AFMAN 36-2108 *Specialty Description* for this career field states that 3- and 5-skill level members conduct training and testing with aerospace physiology devices. This includes delivering briefings to trainees before hypobaric and hyperbaric chamber flights and dives, as well as acting as inside and outside observer or other related crew positions. Related duties involve instructing and supervising trainees in fitting, adjusting and caring for oxygen masks and other personal equipment; and briefing students on parasail and proper parachuting techniques, to include landing-fall procedures, swing landing trainer procedures, and parasail procedures. Finally, these personnel maintain and modify aerospace physiology equipment and associated records.

In addition to the above, 7-skill level members inspect and evaluate aerospace physiology activities, and refer findings and recommendations to aerospace physiologists. They also plan and schedule aerospace physiology activities, including low-pressure, chamber flight, night vision training, and ejection seat training activities. Finally, they supervise records maintenance and establish routine storage, inspection, and maintenance procedures.

At the 9-skill level and Chief Enlisted Manager (CEM) level, members plan, organize, and direct all types of aerospace physiology activities. This includes analyzing workloads and formulating aerospace physiology training and associated policies and procedures.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI) AFPT 90-4M0-028, dated November 1993. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, and tasks from previous applicable OSRs. The preliminary task list was refined and validated through personal interviews with 15 subject-matter experts (SMEs) selected to cover a variety of major commands (MAJCOMs) at the following locations:

BASE	REASON FOR VISIT
Brooks AFB TX	Technical Training School (Training, Research Activities, and Clinical Hyperbaric Medicine)
Beale AFB CA	HQ ACC 2d Air Force (Pressure Suit Activities)
Sheppard AFB TX	80th Flying Training Wing (Undergraduate Pilot Training Activities)

Others contacted include Air Force Military Personnel Center (AFMPC) classification personnel, functional and resource managers, the Air Force functional manager, and the HQ AETC Action Officer.

The resulting JI contains a comprehensive listing of 423 tasks grouped under 14 duty headings, with a background section requesting incumbents to indicate their grade, job title, time in present job, time in service, job satisfaction, and equipment they maintain in their present job.

Survey Administration

From November 1993 to May 1994, military personnel flights at operational bases worldwide administered the inventory to all eligible AFSC 4M0X1 personnel. Members eligible for the survey consisted of the total assigned 3-, 5-, 7-, 9-, and CEM-skill level populations, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring within the time the inventories were administered to the field; and (4) personnel in their jobs less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Human Resources Directorate, Armstrong Laboratory.

Each individual completing the inventory first filled in an identification and biographical information section and then checked each task he or she currently performed on the job. After checking tasks performed, each individual rated tasks checked on a 9-point scale showing

relative time spent on that task, compared to other tasks performed. The ratings range from 1 (very small amount time spent) to 9 (very large amount time spent).

To determine relative time spent for each task, all incumbent's ratings are assumed to account for 100 percent of job time. The ratings are, therefore, summed and each individual task rating is divided by the total of all task ratings and subsequently multiplied by 100 to provide a relative percentage of time spent on each task.

Survey Sample

Personnel were selected to participate in this study to ensure an accurate representation across MAJCOMs and paygrades. Table 1 reflects the percentage, by MAJCOM, of assigned and sampled AFSC 4M0X1 individuals. The 359 respondents in the final sample represent 75 percent of all assigned AFSC 4M0X1 personnel. These data are displayed showing assigned and sampled populations, based on the current MAJCOM structure. This table demonstrates that the sample closely approximates the MAJCOM representation of AFSC 4M0X1 members. Table 2 reflects the percentage distribution by paygrade groups. This table further emphasizes the sample accurately reflects the overall career ladder population.

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 4M0X1 personnel (generally E-6 or E-7 craftsmen) also completed a second booklet for either training emphasis (TE) or task difficulty (TD). The TE and TD booklets were processed separately from the job inventories. The information gained from these task factor data is used in various analysis and is a valuable part of the training decision process.

Training Emphasis (TE). Individuals completing TE booklets were asked to rate tasks on a 10-point scale (from no training required to extremely high amounts of training required). TE is a rating of which tasks require structured training for first-enlistment personnel. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal on-the-job training (OJT), or any other organized training method. TE data were independently collected from 51 experienced 7-skill level personnel stationed worldwide. The interrater reliability for these raters was good, indicating there was strong agreement among raters concerning which tasks required some form of structured training and which did not. In this specialty, tasks have an average TE rating of 2.77 and a standard deviation of 2.02; tasks considered high in TE have ratings of 4.79 and above. TE rating data may also be used to rank order tasks indicating those tasks which senior NCOs in the field consider the most important for first-enlistment personnel to know how to perform.

Task Difficulty (TD). Each individual completing a TD booklet was asked to rate all of the tasks on a 9-point scale (from extremely low to extremely high) as to the relative difficulty of each task in the inventory. Difficulty is defined as the length of time required for the average incumbent to learn how to perform the task. TD data were independently collected from 55 experienced 7-skill level personnel stationed worldwide. Interrater reliability was excellent, reflecting very strong agreement among raters. Ratings were standardized so tasks have an average difficulty of 5.00, with a standard deviation of 1.00. The resulting data yielded a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

When used in conjunction with primary criterion of percent members performing, TD and TE ratings can provide insights into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction which support entry-level jobs.

TABLE 1

MAJCOM REPRESENTATION IN SAMPLE

COMMAND	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
ACC	37	33
AFMC	24	23
AETC	21	24
AMC	8	10
AFSPACE	3	3
PACAF	3	3
USAFE	3	3
AF ELEM	1	1

TOTAL ASSIGNED = 481
TOTAL SURVEYED = 442
TOTAL IN SAMPLE = 359
PERCENT OF ASSIGNED IN SAMPLE = 75%
PERCENT OF SURVEYED IN SAMPLE = 81%

TABLE 2

PAYGRADE DISTRIBUTION OF SAMPLE

PAYGRADE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
E-1 to E-3	26	25
E-4	27	30
E-5	24	23
E-6	12	11
E-7	8	8
E-8	2	2
E-9	1	1

SPECIALTY JOBS
(Career Ladder Structure)

The first step in the analysis process is to identify the structure of the career ladder in terms of the jobs the respondents perform. The Comprehensive Occupational Data Analysis Programs (CODAP) assist by creating an individual job description for each respondent based on tasks performed and relative amount of time spent on tasks. The CODAP automated job clustering program then compares all individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group, or forms new groups based on similarity of tasks and time spent ratings.

The basic group used in the hierarchical clustering process is the job. When two or more jobs have a substantial degree of similarity in tasks performed and time spent performing tasks, they are grouped together and identified as a cluster. The structure of the career ladder is then defined in terms of jobs and clusters of jobs.

Overview of Specialty Jobs

Based on analysis of tasks performed and amount of time spent performing each task, seven independent jobs and one cluster of jobs were identified. Figure 1 illustrates the jobs performed by AFSC 4M0X1 personnel.

A listing of this cluster and independent jobs (IJ) is provided below. The stage (STG) number shown beside each title references computer-printed information, while the letter "N" represents the number of personnel in each group.

I. Entry Level Aerospace Physiology Technician
Independent Job (STG 32, N=22)

II. Aerospace Physiology Technician
Job Cluster (STG 20, N=243)

IIa. Hypobaric Chamber Equipment
Maintenance Job (STG 47, N=45)

IIb. Hypobaric Chamber Instructor
Job (STG 43, N=29)

IIc. Parasail/Ejection Seat Instructor
Job (STG 69, N=60)

IId. NCOIC Operations Job
(STG 50, N=53)

IIe. NCOIC Maintenance Job
(STG 61, N=51)

III. Hyperbaric Chamber Equipment Maintenance Independent Job (STG 31, N=6)

IV. Hyperbaric Chamber Independent Job (STG 30, N=9)

V. Research Chamber Independent Job (STG 22, N=5)

VI. Pressure Suit Independent Job (STG 37, N=29)

VII. Training Independent Job (STG 46, N=6)

VIII. Superintendent Independent Job (STG 35, N=12)

The respondents forming these groups account for 92 percent of the survey sample. The remaining 8 percent were performing tasks which did not group with any defined jobs. Some of the job titles given by respondents which were representative of these personnel include Centrifuge Technician and Administration Specialist.

AEROSPACE PHYSIOLOGY JOBS
AFSC 4M0X1

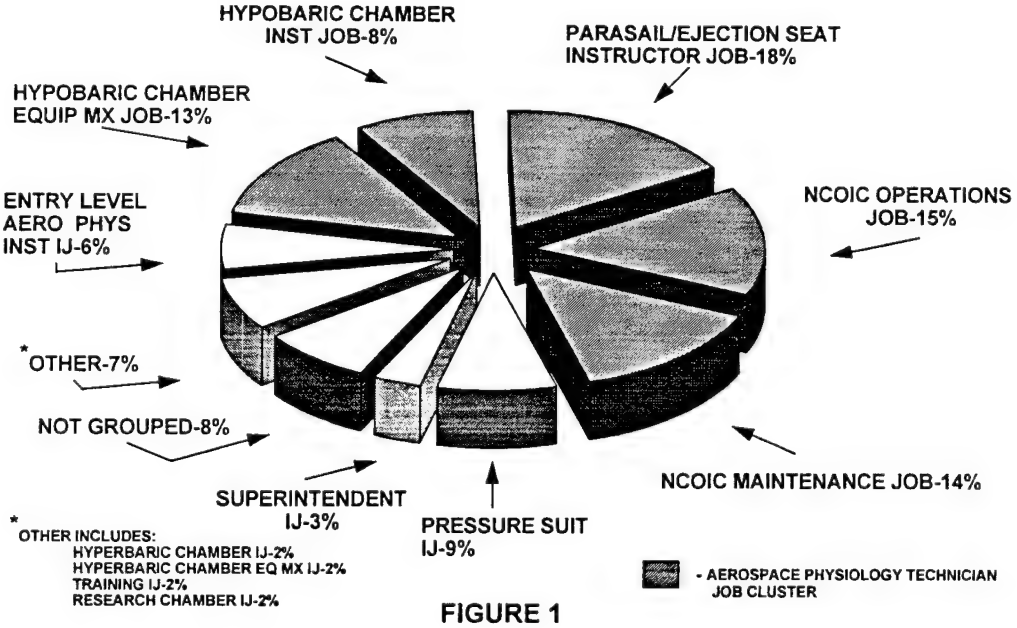

FIGURE 1

TABLE 3

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	ENTRY LEVEL JOB (STG32)	AERO PHYS TECHNICIAN CLUSTER (STG20)	HYPOBARIC EQUIPMENT MAINTENANCE (STG47)	HYPOBARIC CHAMBER INSTRUCTOR (STG43)	PARASAIL/ EJECTION SEAT INSTRUCTOR (STG69)
A ORGANIZING AND PLANNING	7	9	3	8	7
B DIRECTING AND CONTROLLING	*	5	*	3	3
C INSPECTING AND EVALUATING	*	6	1	2	3
D TRAINING	13	12	5	16	15
E PERFORMING ADMINISTRATIVE FUNCTIONS	12	10	12	10	9
F CONDUCTING AEROSPACE PHYSIOLOGY INSTRUCTION	7	20	14	29	28
G OPERATING OR MAINTAINING HYPOBARIC CHAMBERS	37	18	32	25	15
H PERFORMING HAAMS ACTIVITIES	*	2	*	2	*
I OPERATING OR MAINTAINING HYPERBARIC CHAMBERS	10	4	7	0	3
J PERFORMING ACTIVITIES ON LIFE SUPPORT EQUIPMENT	10	8	18	5	4
K PERFORMING PRESSURE SUIT ACTIVITIES	*	*	*	0	0
L OPERATING AND MAINTAINING AIRCRAFT EMERGENCY ESCAPE AND SPECIAL PHYSIOLOGY TRAINERS	2	6	3	*	12
M PERFORMING PHYSIOLOGY RESEARCH ACTIVITIES	*	*	2	*	*

* Denotes less than 1 percent

NOTE: Columns may not add up to 100 percent due to rounding

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	NCOIC OPERATIONS (STG168)	NCOIC MAINTENANCE (STG61)	HYPERBARIC EQUIPMENT MAINTENANCE (STG31)	HYPERBARIC CHAMBER (STG30)	RESEARCH CHAMBER (STG522)
A ORGANIZING AND PLANNING	18	8	14	9	11
B DIRECTING AND CONTROLLING	11	5	7	3	3
C INSPECTING AND EVALUATING	13	7	12	2	7
D TRAINING	15	8	6	4	4
E PERFORMING ADMINISTRATIVE FUNCTIONS	8	14	21	26	9
F CONDUCTING AEROSPACE PHYSIOLOGY INSTRUCTION	12	16	*	2	7
G OPERATING OR MAINTAINING HYPOBARIC CHAMBERS	9	17	7	*	19
H PERFORMING HAAMS ACTIVITIES	5	2	0	0	0
I OPERATING OR MAINTAINING HYPERBARIC CHAMBERS	4	2	13	42	0
J PERFORMING ACTIVITIES ON LIFE SUPPORT EQUIPMENT	4	*	8	9	7
K PERFORMING PRESSURE SUIT ACTIVITIES	*	10	0	0	0
L OPERATING AND MAINTAINING AIRCRAFT EMERGENCY ESCAPE AND SPECIAL PHYSIOLOGY TRAINERS	*	11	*	0	0
M PERFORMING PHYSIOLOGY RESEARCH ACTIVITIES	*	*	11	3	33

* Denotes less than 1 percent

NOTE: Columns may not add up to 100 percent due to rounding

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	PRESSURE SUIT (STG37)	TRAINING (STG46)	SUPERINTENDENT (STG35)
A ORGANIZING AND PLANNING	1	11	27
B DIRECTING AND CONTROLLING	2	10	15
C INSPECTING AND EVALUATING	1	4	22
D TRAINING	3	45	8
E PERFORMING ADMINISTRATIVE FUNCTIONS	3	5	7
F CONDUCTING AEROSPACE PHYSIOLOGY INSTRUCTION	4	4	9
G OPERATING OR MAINTAINING HYPOBARIC CHAMBERS	14	4	6
H PERFORMING HAAMS ACTIVITIES	*	0	0
I OPERATING OR MAINTAINING HYPERBARIC CHAMBERS	8	7	*
J PERFORMING ACTIVITIES ON LIFE SUPPORT EQUIPMENT	6	*	*
K PERFORMING PRESSURE SUIT ACTIVITIES	57	7	1
L OPERATING AND MAINTAINING AIRCRAFT EMERGENCY ESCAPE AND SPECIAL PHYSIOLOGY TRAINERS	*	*	3
M PERFORMING PHYSIOLOGY RESEARCH ACTIVITIES	*	2	*

* Denotes less than 1 percent

NOTE: Columns may not add up to 100 percent due to rounding

TABLE 4

SELECTED BACKGROUND DATA FOR AFSC 4M0X1 CAREER LADDER JOBS

	ENTRY LEVEL JOB	AERO PHYS TECHNICIAN CLUSTER	HYPOBARIC EQUIPMENT MAINTENANCE	HYPOBARIC CHAMBER INSTRUCTOR	PARASAIL/ EJECTION SEAT INSTRUCTOR
NUMBER IN GROUP	22	243	45	29	60
PERCENT OF SAMPLE	6%	68%	13%	8%	18%
DAFSC DISTRIBUTION:					
4M031	82%	15%	38%	28%	10%
4M051	18%	53%	60%	59%	72%
4M071	0%	28%	2%	10%	18%
4M091	0%	4%	0%	3%	0%
PAYGRADE DISTRIBUTION:					
E-1 to E-3	72%	22%	52%	48%	13%
E-4	23%	29%	42%	32%	45%
E-5	5%	26%	4%	10%	34%
E-6	0%	12%	2%	3%	8%
E-7	0%	8%	0%	7%	0%
E-8	0%	2%	0%	0%	0%
E-9	0%	1%	0%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	30	93	66	50	82
AVERAGE MONTHS TAFMS	25	100	43	60	90
PERCENT IN FIRST ENLISTMENT	91%	33%	74%	61%	29%
PERCENT SUPERVISING	0%	46%	4%	17%	42%

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR AFSC 4M0X1 CAREER LADDER JOBS

	NCOIC OPERATIONS	NCOIC MAINTENANCE	HYPERBARIC EQUIPMENT MAINTENANCE	HYPERBARIC CHAMBER	RESEARCH CHAMBER
NUMBER IN GROUP	53	51	6	9	5
PERCENT OF SAMPLE	15%	14%	2%	2%	2%
DAFSC DISTRIBUTION:					
4M031	0%	8%	0%	0%	20%
4M051	21%	55%	50%	78%	40%
4M071	62%	37%	50%	22%	40%
4M091	17%	0%	0%	0%	0%
PAYGRADE DISTRIBUTION:					
E-1 to E-3	0%	12%	0%	0%	0%
E-4	8%	22%	17%	56%	40%
E-5	25%	44%	66%	33%	60%
E-6	23%	20%	0%	11%	0%
E-7	31%	2%	17%	0%	0%
E-8	9%	0%	0%	0%	0%
E-9	4%	0%	0%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	116	136	104	36	31
AVERAGE MONTHS TAFMS	183	102	131	104	108
PERCENT IN FIRST ENLISTMENT	19%	32%	0%	22%	0%
PERCENT SUPERVISING	87%	61%	67%	11%	40%

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR AFSC 4M0X1 CAREER LADDER JOBS

	PRESSURE SUIT	TRAINING	SUPERINTENDENT
NUMBER IN GROUP	29	6	12
PERCENT OF SAMPLE	9%	2%	3%
DAFSC DISTRIBUTION:			
4M031	38%	17%	0%
4M051	62%	66%	8%
4M071	0%	17%	50%
4M091	0%	0%	42%
PAYGRADE DISTRIBUTION:			
E-1 to E-3	45%	0%	0%
E-4	45%	50%	8%
E-5	10%	50%	0%
E-6	0%	0%	17%
E-7	0%	0%	50%
E-8	0%	0%	25%
E-9	0%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	57	69	68
AVERAGE MONTHS TAFMS	47	99	215
PERCENT IN FIRST ENLISTMENT	59%	0%	0%
PERCENT SUPERVISING	10%	17%	100%

Group Descriptions

The following paragraphs contain brief descriptions of the cluster and seven independent jobs identified in the career ladder structure analysis. Appendix A lists representative tasks performed by identified independent jobs and the job cluster. Table 3 displays time spent on duties, while Table 4 provides demographic information for each job discussed in this report.

Another way to illustrate these jobs is to summarize tasks performed into groups of tasks (task modules). This allows for a very concise display of where job incumbents spend most of their time and develops a comprehensive overview of each job. The task module display shows the number of tasks included in a module, the average percent time spent on that module, the cumulative amount of time spent on the listed modules, and finally, the average percent members performing each particular task module. These modules were identified through CODAP co-performance clustering which determines the average probability that members who perform one task will also perform a second task or group of related tasks. Representative task modules are listed as part of each job description. The list of modules, with respective tasks, is presented in Appendix B.

I. ENTRY-LEVEL AEROSPACE PHYSIOLOGY TECHNICIAN IJ (STG 32). The 22 members of this cluster represent 6 percent of the total survey sample. AFSC 4M0X1 personnel perform a variety of Aerospace Physiology functions, however, certain tasks, such as serving as hypobaric chamber flight crew members, are common to the majority of the career field. The entry-level personnel spend most of their time working in these common crew positions and helping prepare students for chamber flights (See Table 3). Representative tasks for this job include:

ENTRY-LEVEL TECHNICIAN JOB	
Number of members	22
Percent of total sample	6%
Average number of tasks performed	30
Average time in present job	2 yrs
Average time in career field	2 yrs
Average TAFMS	2 yrs
Predominant DAFSC	4M031
Predominant paygrades	E-2/E-3
Predominant MAJCOM	ACC

- Serve as chamber operator during hypobaric chamber flights, other than research flights
- Serve as crew chief during hypobaric chamber flights, other than research flights
- Serve as recorder during hypobaric chamber flights, other than research flights
- Serve as lock operator during hypobaric chamber flights, other than research flights
- Serve as inside observer during hypobaric chamber flights, other than research flights
- Schedule students for aerospace physiology training classes
- Treat chamber reactors for hypoxia
- Fit chamber students or patients with oxygen hoods or masks
- Clean flight helmets of chamber students
- Fit chamber students with flight helmets

The majority of entry-level personnel, as seen in Table 4, hold the 3- skill level and average time in service, as measured by Total Active Federal Military Service (or TAFMS), for this group is only 2 years. Incumbents have little experience in the career field and perform an average of only 30 tasks on the job.

Task module analysis shows they spend almost 45 percent of their job time performing 15 hypobaric chamber crew tasks. Data show that members spend almost 10 percent of job time performing managerial duties; however, the six tasks that comprise the Managerial Duties task module primarily relate to preparing training and participating in administrative functions. The managerial nature of the job, therefore, is actually minimal. Further analysis shows that some entry-level personnel also perform hyperbaric chamber operations as this module accounts for nearly 10 percent of job time. Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0023	Hypobaric Chamber Crew Duties	15	44.9	44.9	72
0014	Managerial Duties	6	9.8	54.7	89
0010	Hyperbaric Chamber Operations	8	9.8	64.5	37
0007	Administrative Duties	8	6.5	70.9	26
0005	AFSC 4M0X1 Training	22	6.3	77.2	9
0020	Administrative Duties	14	3.5	80.8	9

II. AEROSPACE PHYSIOLOGY TECHNICIAN JOB CLUSTER (STG 20). The 243 members of this cluster of jobs account for 68 percent of the career field. The work members of this large group perform is core to the career ladder as it primarily involves conducting aerospace physiology instruction and operating and maintaining hypobaric chambers (see Table 3). Five distinct jobs are present in the cluster. These jobs will be discussed separately in the following job descriptions. The tasks members of these jobs share in common include serving as hypobaric chamber crew members and providing chamber students with aerospace physiology instruction. Representative tasks for this cluster of jobs include:

AEROSPACE PHYSIOLOGY TECHNICIAN JOB CLUSTER	
Number of members	243
Percent of total sample	68%
Average number of tasks performed	93
Average time in present job	2 yrs
Average time in career field	6.6 yrs
Average TAFMS	8.3 yrs
Predominant DAFSC	4M051
Predominant paygrades	E-4/E-5
Predominant MAJCOM	ACC

- Serve as chamber operator during hypobaric chamber flights, other than research flights
- Serve as crew chief during hypobaric chamber flights, other than research flights
- Serve as recorder during hypobaric chamber flights, other than research flights
- Serve as lock operator during hypobaric chamber flights, other than research flights
- Serve as inside observer during hypobaric chamber flights, other than research flights

- Brief rapid decompression during chamber flights
- Treat chamber reactors for hypoxia
- Brief chamber flight preflight or postflight procedures
- Brief use of emergency and portable oxygen systems during hypobaric chamber flights
- Serve as lecturer observer during hypobaric chamber flights, other than research chamber flights

The members of this cluster have moderate experience in the career field with an average of 8 years TAFMS (See Table 4). They predominantly hold 5- skill level positions and reside in Air Combat Command (ACC). The work in the cluster is more broad in range than that of the entry-level job as members perform an average of 93 tasks, more than twice as many as their junior counterparts.

Task module analyses show that Aerospace Physiology Technician job cluster members perform tasks evenly across a number of task modules rather than concentrating their time in one or two key areas. Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0023	Hypobaric Chamber Crew Duties	15	16.6	16.6	84
0020	Aerospace Physiology Classroom Instruction	14	12.8	29.4	69
0014	Managerial Duties	6	4.1	33.5	57
0013	Egress Instruction	10	5.0	38.5	45
0009	General Equipment Maintenance	29	11.1	49.6	35
0010	Hyperbaric Chamber Operations	8	2.9	52.5	32
0007	Administrative Duties	8	2.7	55.2	28
0005	AFSC 4M0X1 Training	22	6.8	61.9	29
0002	Parachute/Ejection Instruction	22	5.8	67.7	24
0006	Organizational/Supervisory Duties	76	18.7	86.4	28

IIa. HYPOBARIC CHAMBER EQUIPMENT MAINTENANCE JOB (STG 47). The 45 members of this job comprise 13 percent of the survey sample. Like all respondents in the Aerospace Physiology Technician job cluster, they perform general hypobaric chamber crew duties. The factor that distinguishes their work from that of the other members of the cluster is they spend 32 percent of their time operating or maintaining hypobaric chambers (See Table 3), which is almost twice as much time maintaining hypobaric chambers as members of any other job in the cluster with the exception of the hypobaric chamber instructor job. Additionally, they spend far more time performing activities on life support equipment than any other group in the cluster. Examples of life support equipment activities they often perform include assembling life support equipment and inspecting pressure-demand oxygen components. Representative tasks for members of this job include:

HYPOBARIC CHAMBER EQUIPMENT MAINTENANCE IJ	
Number of members	45
Percent of total sample	13%
Average number of tasks performed	66
Average time in present job	1.6 yrs
Average time in career field	2.8 yrs
Average TAFMS	3.6 yrs
Predominant DAFSC	4M051
Predominant paygrades	E-3/E-4
Predominant MAJCOM	ACC

- Serve as recorder during hypobaric chamber flights, other than research flights
- Serve as inside observer during hypobaric chamber flights, other than research flights
- Serve as crew chief during hypobaric chamber flights, other than research flights
- Perform general maintenance on hypobaric chambers
- Annotate inspections or maintenance forms
- Assemble life support equipment, such as oxygen masks
- Annotate records on status or inspections of equipment
- Perform general maintenance on vacuum pumps
- Perform periodic inspections of hypobaric chamber assemblies
- Inspect pressure-demand oxygen components

Personnel in this job are the most junior members of the Aerospace Physiology Technician job cluster with an average of 3 1/2 years TAFMS. Like all jobs in the cluster, with the exception of the NCOIC Operations job, personnel primarily work in 5- skill level positions (See Table 4).

Task module analysis also clearly shows these personnel focus primarily on hypobaric chamber crew member functions and equipment maintenance; they spend almost 56 percent of their time performing tasks in these two task modules. Further task module analysis shows that, to a lesser extent, the work involves operating and maintaining hyperbaric chambers. Representative task modules for this job include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0023	Hypobaric Chamber Crew Duties	15	23.9	23.9	89
0009	General Equipment Maintenance	29	31.7	55.6	67

0020	Aerospace Physiology Classroom Instruction	14	10.0	65.6	44
0010	Hyperbaric Chamber Operations	8	4.1	.7	40
0018	Routine Hyperbaric Chamber Maintenance	7	2.7	72.4	27
0014	Managerial Duties	6	2.3	74.7	32
0013	Egress Instruction	10	2.8	77.5	22
0001	Supply Duties	19	3.8	81.4	15

IIb. HYPOBARIC CHAMBER INSTRUCTOR JOB (STG 43). The 29 members of this job represent 8 percent of the survey sample. They spend 54 percent of their job time conducting aerospace physiology instruction and operating hypobaric chambers (See Table 3). They are characterized by a greater focus on performing instructional and training related tasks than any other group. Table 3 shows they spend their job time performing duties similar to the Parasail/Ejection Seat Instructor job personnel except that they spend more time operating and maintaining hypobaric chambers and spend virtually no time operating and maintaining aircraft emergency escape and special physiology trainers. Representative tasks are presented below:

HYPOBARIC CHAMBER INSTRUCTOR IJ	
Number of members	29
Percent of total sample	8%
Average number of tasks performed	50
Average time in present job	2.6 yrs
Average time in career field	4.2 yrs
Average TAFMS	5 yrs
Predominant DAFSC	2M051
Predominant pay grade	E-3/E-4
Predominant MAJCOM	ACC

- Conduct classroom instruction concerning use of oxygen masks
- Conduct classroom instruction concerning types of oxygen storage systems
- Conduct classroom instruction concerning use of continuous flow passenger oxygen systems
- Serve as lock operator during hypobaric chamber flights, other than research flights
- Serve as inside observer during hypobaric chamber flights, other than research flights
- Brief rapid decompression during chamber flights
- Treat chamber reactors for hypoxia
- Brief chamber flight preflight or postflight procedures
- Brief use of emergency and portable oxygen systems during hypobaric chamber flights
- Serve as lecturer observer during hypobaric chamber flights, other than research chamber flights

Job incumbents predominately hold the 5-skill level and average 5 years TAFMS (see Table 4). This instructional work is very narrow in scope, and members perform an average of only 50 tasks, the fewest of any job in the cluster.

Task module analysis show that members spend more time performing tasks in the Aerospace Physiology Classroom Instruction module than members of any other job group. Additionally, they perform some supervisory, managerial, and training functions. Representative task modules for this job include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0023	Hypobaric Chamber Crew Duties	15	27.9	27.9	78
0020	Aerospace Physiology Classroom Instruction	4	24.2	52.1	73
0014	Managerial Duties	6	6.8	58.8	54
0007	Administrative Duties	8	5.6	64.4	32
0005	AFSC 4M0X1 Training	22	10.0	74.4	24
0013	Egress Instruction	10	4.5	78.9	26
0004	HAAMS Duties	12	2.4	81.2	16

IIc. PARASAIL/EJECTION SEAT INSTRUCTOR JOB (STG 69) The 60 members of this job account for 17% of the survey sample. They perform most of the same duties as Hypobaric Chamber Instructor job members, but they also spend 12 percent of their time operating and maintaining emergency escape and special physiology trainers, such as spatial disorientation trainers and ejection seat trainers (see Table 3). Conversely, they spend only 15 percent of their time operating or maintaining hypobaric chambers compared to the Hypobaric Chamber Instructors who spend 25 percent of their time on such tasks. Representative tasks for this job include:

PARASAIL/EJECTION SEAT INSTRUCTOR Job	
Number of members	60
Percent of total sample	17%
Average number of tasks performed	82
Average time in present job	3 yrs
Average time in career field	6.3 yrs
Average TAFMS	7.5 yrs
Predominant DAFSC	4M051
Predominant paygrades	E-4/E-5
Predominant MAJCOM	AETC

- Brief rapid decompression during hypobaric chamber flights
- Conduct parachute landing fall (PLF) training
- Brief use of personal protective equipment
- Treat chamber reactors for hyperventilation
- Brief use of spatial disorientation trainers
- Instruct treatment procedures for hyperventilation
- Instruct and evaluate students on PLF platforms
- Brief in-flight egress procedures
- Brief ground egress escape procedures
- Brief ejection seat trainer pre-ejection procedures

Parasail/Ejection Seat Instructor job members predominately hold 5-skill level positions and average 7 1/2 years TAFMS (See Table 4). They are the most senior non-supervisor job group in the Aerospace Physiology Technician job cluster, junior only to the NCOIC Operations and NCOIC Maintenance job members. The nature of the work involved with this job is more broad as members must perform hypobaric chamber instruction and operation tasks as well as emergency escape and special physiology trainer duties. Consequently, incumbents perform an average of 90 tasks compared to Aerospace Physiology Instructors who perform only 60 tasks on average. Another key difference is that members of this job are primarily assigned to Air Education and Training Command (AETC) rather than ACC, as emergency escape and special physiological training is necessary in programs such as undergraduate pilot training (UPT), that are under AETC control.

Task module analyses show members spend almost 9 percent of their time performing tasks in the Egress Instruction task module, more than members of any other job group,

Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0023	Hypobaric Chamber Crew Duties	15	15.9	15.9	82
0020	Aerospace Physiology Classroom Instruction	14	14.6	30.6	79
0013	Egress Instruction	10	8.7	39.2	67
0014	Managerial Duties	6	5.2	44.4	61
0002	Parachute/Ejection Instruction	22	15.4	59.8	53
0007	Administrative Duties	8	3.6	63.3	32
0005	AFSC 4M0X1 Training	22	9.6	72.9	35
0010	Hyperbaric Chamber Operations	8	3.5	76.4	32
0006	Organizational/Supervisory Duties	76	13.0	89.4	17

IId. NCOIC OPERATIONS JOB (STG 50). The 53 members of this job comprise 15% of the survey sample. This job is one of two jobs subsumed in the Aerospace Physiology Technician job cluster involving a combination of technical and supervisory duties. Members spend 21 percent of their job time conducting aerospace physiology instruction and operating and maintaining hypobaric chambers, and 42 percent of their job time performing supervisory and managerial duties (see Table 3). They are essentially a collective group of first-line supervisors. Representative tasks which distinguish this job from others include:

NCOIC OPERATIONS JOB	
Number of members	53
Percent of total sample	15%
Average number of tasks performed	116
Average time in present job	4.3 yrs
Average time in career field	11.6 yrs
Average TAFMS	15.3 yrs
Predominant DAFSC	4M071
Predominant paygrades	E-5/E-7
Predominant MAJCOM	ACC/AFMC

- Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting
- Plan or schedule work assignments or priorities
- Write EPRs
- Establish performance standards for subordinates
- Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOP)
- Determine or establish work procedures
- Develop work procedures
- Counsel personnel on personal or military-related problems
- Supervise Aerospace Physiology Journeymen (AFSC 4M051)
- Establish work schedules

These incumbents are the most senior members of the job cluster with an average of over 15 years TAFMS (see Table 4). They, along with the NCOIC Maintenance job members, are the only members of the job cluster that predominantly hold 7- skill level positions. The dual technical/supervisory nature of the work involved is evident as these personnel perform an average of 116 tasks on their jobs, far more than any other job in the cluster with the exception of the NCOIC Maintenance personnel who perform an average of 136 tasks.

Task module analysis show members spend almost half their time performing tasks in the Organizational/Supervisory Duties task module, while still spending a considerable amount of time conducting aerospace physiology instruction and performing hypobaric chamber crew duties. Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0014	Managerial Duties	6	4.6	4.6	77
0023	Hypobaric Chamber Crew Duties	15	9.8	14.3	76

0020	Aerospace Physiology Classroom Instruction	14	8.0	22.4	61
0006	Organizational/Supervisory Duties	76	41.0	63.4	61
0004	HAAMS Duties	12	5.2	68.6	36
0010	Hyperbaric Chamber Operations	8	3.2	71.8	47
0005	AFSC 4M0X1 Training	22	8.4	80.2	46

IIe. NCOIC MAINTENANCE JOB (STG 61). The 51 members of this job account for 14 percent of the survey sample. This job is the final job in the Aerospace Physiology Technician job cluster. Like the NCOIC Operations job members, these incumbents perform first-line supervisor duties. The main difference in the work they perform is they do not perform supervisory duties to the extent that the NCOIC Operations personnel do. Table 3 shows a good comparison of duty time between the groups. Notice that NCOIC Operations personnel spend 42 percent of their time performing the organizing and supervisory tasks in duties A through C, while the NCOIC Maintenance incumbents spend only 20 percent of their time performing these functions. The NCOIC Maintenance personnel, on the other hand, spend 21 percent of their time operating and maintaining Aerospace Physiology equipment and performing pressure suit activities. Representative tasks for this cluster include:

NCOIC MAINTENANCE JOB	
Number of members	51
Percent of total sample	14%
Average number of tasks performed	136
Average time in present job	3.3 yrs
Average time in career field	6.9 yrs
Average TAFMS	8.5 yrs
Predominant DAFSC	4M051
Predominant paygrades	E-5
Predominant MAJCOM	AETC

- Brief chamber flight preflight or postflight procedures
- Serve as lecturer observer during hypobaric chamber flights, other than research flights
- Annotate records on status or inspections of equipment
- Annotate inspection or maintenance forms
- Clean aerospace physiology equipment, training aids, and devices
- Perform general maintenance on hypobaric chambers
- Perform daily inspections of hypobaric chamber assemblies
- Store equipment, tools, or supplies
- Assemble life support equipment, such as oxygen masks
- Perform general maintenance on vacuum pumps

NCOIC Maintenance job personnel are the second most senior members of the cluster with an average of 8 1/2 years TAFMS (see Table 4). Unlike NCOIC Operations incumbents, they predominately hold 5-skill level positions and primarily work in AETC rather than ACC.

Task module analyses show they spend moderate amounts of time working in many tasks modules rather than spending considerable worktime on one or two key task areas. The broad

nature of the work is also highlighted by the fact that members perform an average of 136 tasks, more than any other job group in the cluster. Representative task modules for this job include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0023	Hypobaric Chamber Crew Duties	15	11.9	11.9	96
0020	Aerospace Physiology Classroom Instruction	14	10.9	22.8	88
0009	General Equipment Maintenance	29	15.7	38.4	72
0013	Egress Instruction	10	4.8	43.2	62
0001	Supply Duties	19	7.4	50.6	50
0014	Managerial Duties	6	2.3	52.9	55
0019	Night Vision/Spatial Disorientation Equipment Maintenance	5	1.8	54.8	56
0002	Parachute/Ejection Instruction	22	6.3	61.1	38
0006	Organizational/Supervisory Duties	76	20.3	81.4	39
0012	Parachute/Ejection Equipment Maintenance	19	4.5	85.9	35

III. HYPERBARIC CHAMBER EQUIPMENT MAINTENANCE IJ (STG 31). The six members of this job account for 2 percent of the survey sample. These incumbents are the first job members discussed that perform work primarily outside of the conventional aerospace physiology technician arena. They spend more time operating and maintaining hyperbaric chambers and work very little with hypobaric chambers. Furthermore, they spend 11 percent of their time performing physiology research activities (See Table 3). The primary factor that sets their work apart from the Hyperbaric Chamber job members is they spend 33 percent of their time performing organizing and supervisory duties, and 21 percent of their time performing administrative functions. They essentially perform the function of hyperbaric chamber maintenance supervisors. Representative tasks for this job include:

HYPERBARIC CHAMBER EQUIPMENT MAINTENANCE IJ	
Number of members	6
Percent of total sample	2%
Average number of tasks performed	104
Average time in present job	3 yrs
Average time in career field	10.7 yrs
Average TAFMS	10.9 yrs
Predominant DAFSC	4M051/4M071
Predominant paygrades	E-5
Predominant MAJCOM	AFMC

- Direct equipment maintenance or utilization
- Store equipment, tools, or supplies
- Annotate inspection or maintenance forms
- Coordinate maintenance or supply matters with appropriate agencies
- Compile information for records, reports, or logs
- Maintain records on status or inspections of equipment

- Plan equipment or facility maintenance requirements
- Inventory equipment, tools, or supplies
- Maintain documentation on items requiring periodic inspections
- Annotate records on status or inspections of equipment

Hyperbaric Chamber Equipment Maintenance job members average nearly 11 years TAFMS and predominately hold either 5- or 7- skill level positions (see Table 4). They are also the first job incumbents mentioned primarily assigned to AFMC.

Task module analysis show, like other supervisor job members, they spend their time performing a wide range of duties including both technical, and administrative and supervisory duties. Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0018	Routine Hyperbaric Chamber Maintenance	7	4.7	4.7	67
0010	Hyperbaric Chamber Operations	8	4.9	9.5	54
0001	Supply Duties	19	11.4	21.0	55
0009	General Equipment Maintenance	29	15.0	36.0	52
0016	Research Chamber Crew Duties	7	3.6	39.6	40
0006	Organizational/Supervisory Duties	76	30.9	70.5	43
0023	Hypobaric Chamber Crew Duties	15	6.1	76.6	52
0014	Managerial Duties	6	2.3	78.9	40
0007	Administrative Duties	8	2.9	81.8	43

IV. HYPERBARIC CHAMBER IJ (STG 30). The nine members of this group account for only 2 percent of the survey sample. These personnel perform work similar to that of the Hyperbaric Chamber Equipment Maintenance job members. The key difference is they spend 29 percent more time operating or maintaining hyperbaric chambers and 19 percent less time performing organizing and supervisory duties (see Table 3). They are likely to perform hyperbaric chamber flight crew duties and routine administrative functions. Representative tasks for this cluster include:

HYPERBARIC CHAMBER IJ	
Number of members	9
Percent of total sample	2%
Average number of tasks performed	36
Average time in present job	3.3 yrs
Average time in career field	6.9 yrs
Average TAFMS	8.6 yrs
Predominant DAFSC	4MO51
Predominant paygrades	E-4
Predominant MAJCOM	AFMC

- Load or remove patients in hyperbaric chambers
- Serve as crew chief and lock operator during hyperbaric chamber dives
- Serve as chamber operator during hyperbaric

chamber dives

- Serve as inside observer during hyperbaric chamber dives
- Clean hyperbaric chambers
- Serve as recorder during hyperbaric chamber dives
- Serve as timekeeper during hyperbaric chamber dives
- Perform daily inspections of hyperbaric chamber assemblies
- Charge compressed-air flasks
- Perform daily inspections of low-pressure compressors

Hyperbaric Chamber job incumbents average about 8 1/2 years TAFMS and primarily hold 5-skill level positions (See Table 4). They, like all hyperbaric chamber personnel, are predominantly assigned to Air Force Material Command (AFMC).

Task module analyses show they spend almost 30 percent of their time performing tasks in the Hyperbaric Chamber Operation task module. They generally spend the remainder of their time performing various administrative and maintenance-related functions. The scope of the work they perform is narrow as they perform only an average of 36 tasks. Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0010	Hyperbaric Chamber Operations	8	28.7	28.7	82
0018	Routine Hyperbaric Chamber Maintenance	7	12.1	40.8	57
0007	Administrative Duties	8	11.3	52.1	53
0001	Supply Duties	19	9.2	61.3	20
0014	Managerial Duties	6	2.8	64.2	24
0009	General Equipment Maintenance	29	9.8	73.9	15
0023	Hypobaric Chamber Crew Duties	15	4.3	78.3	7
0028	Organizational/Supervisory Duties	76	11.5	89.8	6

V. RESEARCH CHAMBER IJ (STG 22). The 5 members of this job represent 1 percent of the survey sample. Research chamber job incumbents have one of the most distinct jobs in the career ladder. They spend over half of their time operating and maintaining hypobaric chambers and performing physiological research functions (see Table 3). They also serve as crewmembers on research chamber flights in an experimental rather than instructional capacity. Distinct duties include fitting subjects for in-flight monitoring equipment and recording experimental data. Representative tasks for this job include:

RESEARCH CHAMBER IJ	
Number of members	5
Percent of total sample	1%
Average number of tasks performed	31
Average time in present job	2.8 yrs
Average time in career field	8 yrs
Average TAFMS	9 yrs
Predominant DAFSC	4M051
Predominant paygrades	E-4/E-5
Predominant MAJCOM	AFMC

- Size and fit research subjects with oxygen equipment
- Serve as chamber operator during research chamber flights
- Serve as inside observer during research chamber flights
- Serve as outside observer during research chamber flights
- Serve as recorder during research chamber flights
- Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness
- Serve as crew chief during research chamber flights
- Serve as lock operator during research chamber flights
- Record experimental data
- Calibrate analytical devices, such as flowmeters or recording equipment

Research Chamber job members average about 9 years TAFMS and predominately hold 5- skill level positions in support of AFMC operations (see Table 4).

Task module analyses show that incumbents spend almost 22 percent of their job time performing the seven tasks in the Research Chamber Crew Duties task module, and they are the only job group routinely performing tasks in the In-Flight Equipment Monitoring task module. They accomplish tasks across a variety of task modules; however, their work is actually quite narrow in scope as they perform an average of only 31 tasks, the fewest of any job group in the survey except Entry-Level job personnel.

Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0016	Research Chamber Crew Duties	7	21.7	21.7	77
0021	In-Flight Equipment Monitoring	4	6.2	27.9	40
0023	Hypobaric Chamber Crew Duties	15	13.8	41.7	29

0014	Managerial Duties	6	4.7	46.4	27
0007	Administrative Duties	8	6.1	51.5	18
0020	Aerospace Physiology Classroom Instruction	14	9.7	57.5	13
0009	General Equipment Maintenance	29	18.9	67.3	12
0006	Organizational/Supervisory Duties	76	2.2	86.2	9

VI. PRESSURE SUIT IJ (STG 37). The 29 members of the Pressure Suit job comprise 8 percent of the survey sample. Like the Research Chamber job members, their work is very different from the work generally performed in the career field. Pressure Suit job incumbents, primarily assigned to Beale AFB, spend over half of their time performing pressure suit support activities such as cleaning, packing, and inspecting full pressure suits. See Table 3 for a complete listing of time spent on duties. Due to the specific nature of the work, personnel receive most of their training at the operational level rather than at the Technical Training School. Representative tasks for this cluster include:

PRESSURE SUIT IJ	
Number of members	29
Percent of total sample	8%
Average number of tasks performed	57
Average time in present job	2.6 yrs
Average time in career field	3.2 yrs
Average TAFMS	3.9 yrs
Predominant DAFSC	4M051
Predominant paygrades	E-4
Predominant MAJCOM	ACC

- Connect or disconnect crewmembers to aircraft systems
- Perform occupied full pressure suit integration tests
- Fill portable liquid oxygen (LOX) ventilation units
- Clean pressure suits
- Perform periodic inspections of full pressure suits
- Pack pressure suit assemblies for shipment
- Remove or replace full pressure suit components
- Assemble or disassemble pressure suit hardware, such as neck rings or urine collection valves
- Perform preflight or postflight inspections of low-flight oxygen regulators
- Perform preflight or postflight inspections of full pressure suits

Incumbents generally have only moderate experience in the career ladder as they average only 4 years TAFMS (see Table 4). They, like the majority of AFSC 4M0X1 members, are primarily assigned to ACC.

Task module analyses show that these personnel spend almost 54 percent of their time performing pressure suit maintenance activities. Examples of these functions include cementing pressure suit assemblies, inspecting pressure suit assemblies, and isolating full pressure suit malfunctions. The narrow scope of their work is apparent as they spend over 80 percent of their

time performing tasks in 4 task modules and, on average, they perform only 57 tasks. Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0003	Pressure Suit Maintenance	42	53.8	53.8	57
0023	Hypobaric Chamber Crew Duties	15	16.1	69.9	68
0010	Hyperbaric Chamber Operations	8	6.8	76.7	69
0009	General Equipment Maintenance	29	6.2	82.9	16

VII. TRAINING IJ (STG 46). The six members of this job comprise 2 percent of the survey sample. Training personnel manage AFSC 4M0X1 training programs at Brooks AFB, Wright Patterson AFB, and Beale AFB. They spend 70 percent of their time performing managerial and training tasks such as planning and scheduling training, evaluating the effectiveness of training programs, and conducting training conferences or briefings (See Table 3). Representative tasks for this cluster include:

TRAINING IJ	
Number of members	6
Percent of total sample	2%
Average number of tasks performed	69
Average time in present job	1.8 yrs
Average time in career field	7.4 yrs
Average TAFMS	8.3 yrs
Predominant DAFSC	4M051
Predominant paygrades	E-4/E-5
Predominant MAJCOM	ACC

- Evaluate progress of trainees
- Evaluate training methods or techniques
- Plan or schedule training
- Evaluate effectiveness of training programs
- Counsel trainees on training progress
- Administer or score training tests
- Conduct training conferences or briefings
- Conduct OJT upgrade training
- Determine student training schedules
- Construct or develop training materials, aids, or devices

Incumbents are primarily 5-skill level members, assigned to ACC, with approximately 8 1/2 years TAFMS (see Table 4).

Task module analyses show they spend almost 54 percent of their time performing tasks in the Training and Organizational/Supervisory Duties task modules. Their work is narrow in scope as they perform an average of only 69 tasks. Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0005	AFSC 4M0X1 Training	22	29.0	29.0	80
0014	Managerial Duties	6	7.2	36.2	72

0010	Hyperbaric Chamber Operations	8	4.3	40.5	33
0006	Organizational/Supervisory Duties	76	28.4	68.8	26
0018	Routine Hyperbaric Chamber Maintenance	7	2.2	71.0	21
0023	Hypobaric Chamber Crew Duties	15	4.1	75.1	24
0007	Administrative Duties	8	1.7	76.9	19
0020	Aerospace Physiology Classroom Instruction	14	2.7	79.6	19
0003	Pressure Suit Maintenance	42	6.9	86.5	12

VIII. SUPERINTENDENT IJ (STG 35). The 12 members of this job comprise 3 percent of the survey sample. Unlike the first-line supervisor jobs previously discussed, these incumbents manage the career field and perform very few technical functions. They spend 64 percent of their time performing organizational and supervisory tasks and only about 19 percent of their time working on technical functions (see Table 3). They spend the remainder of their time primarily conducting administrative and training duties. Representative tasks for this cluster include:

SUPERINTENDENT IJ	
Number of members	12
Percent of total sample	3%
Average number of tasks performed	67
Average time in present job	2.2 yrs
Average time in career field	13 yrs
Average TAFMS	17.9 yrs
Predominant DAFSC	4M071/4M091
Predominant paygrades	E-7
Predominant MAJCOM	AFMC/AETC

- Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting
- Conduct self-inspections
- Conduct performance feedback worksheets (PFW) evaluation sessions
- Write recommendations for awards and decorations
- Write EPRs
- Determine or establish work priorities
- Develop self-inspection program checklists
- Counsel personnel on personal or military related matters
- Evaluate personnel for compliance with performance standards
- Indorse enlisted performance reports EPRs

Superintendent job members are the most experienced personnel in the career field, as they average almost 18 years TAFMS and predominantly hold 7- and 9- skill level positions (see Table 4). Most of them are assigned to either AFMC or ACC.

Task module analyses show they spend almost 61 percent of their time performing the 76 tasks that comprise the Organizational/Supervisory Duties task module. Representative task modules for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0014	Managerial Duties	6	5.7	5.7	53
0006	Organizational/Supervisory Duties	76	60.9	66.6	50
0023	Hypobaric Chamber Crew Duties	15	7.3	73.8	38
0020	Aerospace Physiology Classroom Instruction	14	4.7	78.6	24
0007	Administrative Duties	8	2.0	80.5	18

Comparison to Previous Study

The AFSC 4M0X1 career ladder structure has changed very little since the previous study (see Table 5). The primary difference is the jobs are identified more specifically in the current study. The Aerospace Physiology Technician job cluster personnel, identified in the current study, perform the same functions as the Aerospace Physiology Training Personnel identified in the previous study. The Entry-Level Physiology Technician IJ was not identified in the previous study as these personnel were grouped with their more experienced counterparts. The Hyperbaric Chamber Equipment Maintenance and Training IJ personnel were not identified in the previous study. These incumbents are more experienced and perform many supervisory functions and hence were likely grouped with the Supervisors and Administrators in the last survey. Finally, the Centrifuge personnel were not identified in the current study. This function still exists in the career field; however, respondents performing these duties were accomplishing different tasks and hence did not represent a cohesive job group.

TABLE 5

SPECIALTY JOB COMPARISONS BETWEEN CURRENT AND 1988 SURVEYS

CURRENT SURVEY (N=359)	PERCENT OF SAMPLE	1988 (AFSC 911X0) SURVEY (N=397)	PERCENT OF SAMPLE
ENTRY LEVEL AEROSPACE PHYSIOLOGY TECHNICIAN INDEPENDENT JOB	6	NOT IDENTIFIED	-
AEROSPACE PHYSIOLOGY TECHNICIAN JOB CLUSTER	68	AEROSPACE PHYSIOLOGY TRAINING PERSONNEL	61
HYPERBARIC CHAMBER EQUIP MAINTENANCE INDEPENDENT JOB	2	NOT IDENTIFIED	-
HYPERBARIC CHAMBER INDEPENDENT JOB	2	HYPERBARIC CHAMBER PERSONNEL	3
RESEARCH CHAMBER INDEPENDENT JOB	2	RESEARCH CHAMBER PERSONNEL	2
PRESSURES SUIT INDEPENDENT JOB	9	PRESSURE SUIT PERSONNEL	14
TRAINING INDEPENDENT JOB	2	NOT IDENTIFIED	-
SUPERINTENDENT INDEPENDENT JOB	3	SUPERVISORS AND ADMINISTRATORS	13
NOT IDENTIFIED	-	CENTRIFUGE PERSONNEL	2

*Indicates no match in report

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with analysis of the career ladder structure, is an important part of each occupational survey. DAFSC analysis examines differences in tasks performed between skill-level members. This information may then be used to evaluate how well career ladder documents, such as AFMAN 36-2108 *Specialty Descriptions,* reflect what career ladder personnel are doing in the field.

The distribution of AFSC 4M0X1 skill-level groups across career ladder jobs is displayed in Table 6. Notice that far more 3-skill level personnel grouped within the Entry Level Aerospace Physiology Technician IJ than any other DAFSC group, and as members progress to 7- and 9- skill level positions, they tend to hold supervisory jobs such as NCOIC Operations. Table 7 offers another perspective by displaying relative percent time spent on each duty across skill-level groups. Once again, typical career ladder progression is evident as members spend increasingly more duty time performing supervisory functions as they progress in skill-level.

Skill-Level Descriptions

DAFSC 4M031. The 77 3-skill level personnel, representing 21 percent of the survey sample, perform an average of only 49 tasks, the fewest of any DAFSC group, and primarily perform the Entry-Level Aerospace Physiology Technician and Hypobaric Chamber Equipment Maintenance jobs (see Table 6). They spend 42 percent of their time operating and maintaining hypobaric chambers and conducting aerospace physiology instruction (see Table 7). Additionally, more 3-skill level personnel perform pressure suit activities than members of any other skill-level group. Table 8, which shows the tasks they perform, demonstrates the basic technical nature of their work.

DAFSC 4M051. The 180 5-skill level personnel, representing 50 percent of the survey sample, perform an average of 75 tasks. They perform work primarily in the Aerospace Physiology Technician job cluster and more perform the Parasail/Ejection Seat Instructor job than any other DAFSC group members (see Table 6). Table 7 shows they spend their time performing tasks in support of a variety of technical functions that most often involve operating and maintaining hypobaric chambers and conducting aerospace physiology instruction. Table 9 shows that, like their junior counterparts, they perform primarily technical tasks. The factor distinguishing them from 3-skill level members is they perform some basic supervisory and training functions (see Table 10).

DAFSC 4M071. The 87 7-skill level personnel, representing 24 percent of the survey sample, perform an average of 109 tasks, more tasks than other skill-level groups, because they are first-line supervisors. Table 6 shows they perform the NCOIC Operations and Maintenance jobs which require both supervisory and technical functions. Table 7 further emphasizes the dual nature of their work as they spend 36 percent of their time performing tasks in duty areas A-C which are supervisory in nature. Additionally, Table 11 shows tasks they most often perform are a mixture of supervisory and technical tasks. They distinguish themselves from their junior

counterparts as more perform supervisory duties such as writing enlisted performance reports (EPRs) and conducting performance feedback worksheet (PFW) evaluation sessions (see Table 12).

TABLE 6

DISTRIBUTION OF SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS

JOB	DAFSC 4MO31 (N=77)	DAFSC 4M051 (N=180)	DAFSC 4M071 (N=87)	DAFSC 4M091 (N=15)
ENTRY-LEVEL AEROSPACE PHYSIOLOGY TECHNICIAN INDEPENDENT JOB	23	2	0	0
AEROSPACE PHYSIOLOGY TECHNICIAN JOB CLUSTER	47	72	78	67
HYPOBARIC CHAMBER EQUIPMENT MAINTENANCE JOB	21	16	1	0
HYPOBARIC CHAMBER INSTRUCTOR JOB	10	9	3	7
PARASAIL/EJECTION SEAT INSTRUCTOR JOB	8	24	13	0
NCOIC OPERATIONS JOB	0	7	38	60
NCOIC MAINTENANCE JOB	5	16	22	0
HYPERBARIC CHAMBER EQUIPMENT MAINTENANCE INDEPENDENT JOB	0	2	3	0
HYPERBARIC CHAMBER INDEPENDENT JOB	0	4	2	0
RESEARCH CHAMBER INDEPENDENT JOB	1	1	2	0
PRESSURE SUIT INDEPENDENT JOB	14	10	0	0
TRAINING INDEPENDENT JOB	1	2	1	0
SUPERINTENDENT INDEPENDENT JOB	0	1	7	27
NOT GROUPED	14	6	7	6

DAFSC 4M091. The 15 9-skill level personnel, representing only 4 percent of the survey sample, perform an average of 100 tasks. These experienced personnel perform work in NCOIC Operations and Superintendent jobs (see Table 6). They spend almost all their time performing supervisory and administrative tasks, although they still perform some technical duties (see Table 7). Table 13 lists tasks representative of 9- skill level members' work, while Table 14 shows the tasks which best differentiate them from their junior counterparts. It is apparent that 9- skill level members are primarily pure supervisors who do not perform technical and training functions.

Summary

Three-skill level and 5-skill level airmen perform many tasks in common, and both groups spend the majority of their relative job time on technical functions. Five- skill level personnel perform basic training tasks, but neither group performs many supervisory duties. Seven-skill level personnel are first-line supervisors that perform many technical as well as supervisory functions. At the 9- skill level, members perform some technical functions but concentrate primarily on supervisory and managerial duties.

ANALYSIS OF AFMAN 36-2108 *SPECIALTY DESCRIPTIONS*

Survey data were compared to AFMAN 36-2108 *Specialty Descriptions* for AFSC 4M0X1 Aerospace Physiology Journeymen, Craftsmen, and Superintendents, dated 31 October 1993. The descriptions for the 5-, 7-, and 9- skill level members were accurate, depicting technical aspects of the job, as well as the increase in supervisory responsibilities previously described in the DAFSC analysis. The descriptions also capture the primary responsibilities of job members identified in the job structure analysis.

TABLE 7

TIME SPENT ON DUTIES BY MEMBERS OF SKILL-LEVEL GROUPS
(RELATIVE PERCENT OF JOB TIME)

JOB		DAFSC 4MO31 (N=77)	DAFSC 4M051 (N=180)	DAFSC 4M071 (N=87)	DAFSC 4M091 (N=15)
A	ORGANIZING AND PLANNING	4	7	16	24
B	DIRECTING AND CONTROLLING	*	4	9	15
C	INSPECTING AND EVALUATING	*	3	11	22
D	TRAINING	9	10	13	13
E	PERFORMING ADMINISTRATIVE FUNCTIONS	9	12	10	6
F	CONDUCTING AEROSPACE PHYSIOLOGY INSTRUCTION	13	17	14	6
G	OPERATING OR MAINTAINING HYPOBARIC CHAMBERS	29	17	10	8
H	PERFORMING HAAMS ACTIVITIES	*	1	2	2
I	OPERATING OR MAINTAINING HYPERBARIC CHAMBERS	6	6	5	2
J	PERFORMING ACTIVITIES ON LIFE SUPPORT EQUIPMENT	11	8	5	1
K	PERFORMING PRESSURE SUIT ACTIVITIES	10	7	*	1
L	OPERATING AND MAINTAINING AIRCRAFT EMERGENCY ESCAPE AND SPECIAL PHYSIOLOGICAL TRAINERS	6	5	3	*
M	PERFORMING PHYSIOLOGY RESEARCH ACTIVITIES	2	3	2	*

* Denotes less than 1 percent

NOTE: Columns may not add up to 100 percent due to rounding

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY DAFSC 4M031 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=77)
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	94
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	90
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	90
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	88
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	87
G 232	Treat chamber reactors for hypoxia	83
G 231	Treat chamber reactors for hyperventilation	79
G 230	Treat chamber reactors for claustrophobia or apprehension	73
G 208	Connect or disconnect high-pressure oxygen cylinders	70
J 273	Fit chamber students with flight helmets	66
J 272	Fit chamber students or patients with oxygen hoods or masks	64
F 178	Brief rapid decompression during chamber flights	62
D 92	Clean aerospace physiology equipment, training aids, and devices	58
J 269	Clean flight helmets of chamber students	56
G 229	Store high-pressure oxygen cylinders	51
J 277	Recharge chamber portable oxygen assemblies	48
J 276	Purge chamber portable oxygen assemblies	47
J 281	Store oxygen equipment	47
G 233	Treat chamber reactors for mechanical effects of pressure cha[illegible] such as decompression sickness	47
G 214	Perform oxygen flow checks of narrow panel pressure-demand oxygen regulators	45

TABLE 9

REPRESENTATIVE TASKS PERFORMED BY DAFSC 4M051 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=180)
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	82
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	81
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	80
G 232	Treat chamber reactors for hypoxia	80
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	79
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	79
G 231	Treat chamber reactors for hyperventilation	77
F 178	Brief rapid decompression during chamber flights	74
G 230	Treat chamber reactors for claustrophobia or apprehension	73
J 272	Fit chamber students or patients with oxygen hoods or masks	71
G 208	Connect or disconnect high-pressure oxygen cylinders	71
J 273	Fit chamber students with flight helmets	67
E 131	Conduct tours of aerospace physiology facilities	67
D 92	Clean aerospace physiology equipment, training aids, and devices	66
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	66
G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness	64
F 173	Brief chamber flight preflight or postflight procedures	63
F 176	Brief hypobaric chamber flight preflight oxygen equipment inspection procedures	62
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	61
G 226	Serve as lecturer observer during hypobaric chamber flights, other than research flights	60

TABLE 10

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 4M031 AND DAFSC 4M051 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 4M031 (N=77)	DAFSC 4M051 (N=180)	DIFFERENCE
D 111	Conduct OJT	2	23	-21
F 171	Create aircraft or support equipment maintenance discrepancies in CAMS	14	35	-21
B 69	Supervise Aircraft Armament Systems Specialists (AFSC 2W151)	0	21	-21
D 116	Demonstrate how to locate technical information	3	22	-19
A 14	Determine work priorities	1	20	
B 72	Supervise Apprentice Aircraft Armament Systems Specialists (AFSC 2W131)	0	19	
C 81	Evaluate individuals for compliance with performance standards	0	18	-18
B 37	Counsel personnel on personal or military-related matters	0	17	-17
C 103	Prepare EPRs	0	17	-17
D 115	Counsel trainees on training progress	0	17	-17
G 197	Locate part numbers from illustrated parts breakdowns	31	47	-16

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY DAFSC 4M071 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=87)
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	90
A 5	Determine or establish work priorities	87
C 84	Write EPRs	82
C 58	Conduct performance feedback worksheet (PFW) evaluation sessions	82
G 232	Treat chamber reactors for hypoxia	82
G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness	82
G 231	Treat chamber reactors for hyperventilation	82
G 230	Treat chamber reactors for claustrophobia or apprehension	82
A 10	Develop work procedures	80
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	79
F 178	Brief rapid decompression during chamber flights	79
A 22	Plan or schedule work assignments or priorities	78
A 13	Establish performance standards for subordinates	78
F 173	Brief chamber flight preflight or postflight procedures	77
B 36	Counsel personnel on personal or military related problems	
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	77
A 12	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	76
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	76
C 85	Write recommendations for awards and decorations	75
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	75

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 4M051 AND DAFSC 4M071 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 4M051 (N=180)	DAFSC 4M071 (N=87)	DIFFERENCE
C 58	Conduct performance feedback worksheet (PFW) evaluation sessions	21	82	-61
C 85	Write recommendations for awards and decorations	15	75	-60
C 84	Write EPRs	24	82	-58
A 5	Determine or establish work priorities	33	87	-54
A 13	Establish performance standards for subordinates	28	78	-50
A 22	Plan or schedule work assignments or priorities	28	78	-50
C 59	Conduct self inspections	23	73	-50
A 10	Develop work procedures	31	80	-49
C 74	Evaluate personnel for promotion, demotion, reclassification, or special awards	12	61	-49
C 81	Inspect personnel for compliance with military standards	16	65	-49
B 36	Counsel personnel on personal or military-related problems	29	77	-48

TABLE 13

REPRESENTATIVE TASKS PERFORMED BY DAFSC 4M091 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=15)
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	100
B 36	Counsel personnel on personal or military related problems	100
A 13	Write EPRs	100
A 1	Assign personnel to duty positions	100
A 3	Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	100
C 84	Write EPRs	93
C 80	Indorse enlisted performance reports (EPRs)	93
A 5	Determine or establish work priorities	93
C 74	Evaluate personnel for promotion, demotion, or classification	93
A 12	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	93
C 73	Evaluate personnel for compliance with performance standards	93
C 58	Conduct performance feedback worksheet (PFW) evaluation sessions	93
A 24	Plan self-inspection programs	93
C 59	Conduct self-inspections	93
C 85	Write recommendations for awards and decorations	87
A 10	Develop work procedures	87
A 9	Develop self-inspection programs	87
B 42	Implement self-inspection programs	87
C 76	Evaluate safety or security programs	87
A 7	Develop inputs to mobility, contingency, disaster preparedness, unit emergency, or alert plans	87

TABLE 14

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 4M071 AND DAFSC 4M091 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 4M071 (N=87)	DAFSC 4M091 (N=15)	DIFFERENCE
F 195	Conduct classroom instruction concerning use of continuos-flow passenger oxygen systems	55	7	48
F 194	Conduct classroom instruction concerning types of oxygen storage systems	59	13	46
F 196	Conduct classroom instruction concerning use of oxygen masks	57	13	44
F 190	Conduct classroom instruction concerning parachuting principles and procedures	44	0	44
F 185	Conduct classroom instruction concerning aircraft pressurization principles and problems	49	7	42
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	76	34	42
F 177	Brief-in-flight egress procedures	41	0	41
C 80	Indorse enlisted performance reports (EPRs)	31	93	-62
B 47	Initiate requests for personnel replacements	21	80	-59
C 68	Evaluate layouts of facilities	25	80	-55
A 20	Plan layouts of facilities	29	80	-51
A 7	Develop inputs to mobility, contingency, disaster preparedness, unit emergency, or alert plans	36	87	-51
C 76	Evaluate safety or security programs	36	87	-51
A 24	Plan self-inspection programs	46	93	-47
B 51	Supervise Aerospace Physiology Craftsmen (AFSC 4M071)	36	80	-44
C 63	Evaluate budget requirements	37	80	-43

TRAINING ANALYSIS

Occupational surveys provide information which can be used to assist in the development of training programs relevant to needs of personnel in their first enlistment. Factors used to evaluate entry-level AFSC 4M0X1 training include duties performed by members across career ladder jobs, percentages of members performing specific tasks, ratings of how much training emphasis (TE) tasks should receive in formal training, and relative task difficulty (TD) ratings.

First-Enlistment Personnel

In this study there are 132 members in their first enlistment (1-48 months' TAFMS), representing 37 percent of the survey sample. These personnel work primarily in Aerospace Physiology Technician cluster jobs (see Figure 2). They spend much of their time operating and maintaining hypobaric chambers and conducting aerospace physiology instruction (see Table 15). Some members perform pressure suit support functions, but very few members with this level of experience work with hyperbaric chambers. Notice, in Table 16, that first-enlistment personnel perform basic hypobaric chamber flight tasks, such as serving as flight crewmembers and fitting students for chamber flights. At this level, members perform some administrative functions but very few training functions and virtually no supervisory duties.

Table 17 presents a short list of equipment items used by more than 20 percent of first-enlistment AFSC 4M0X1 personnel. Members use vacuum pumps, compressors, and audiovisual equipment on their jobs.

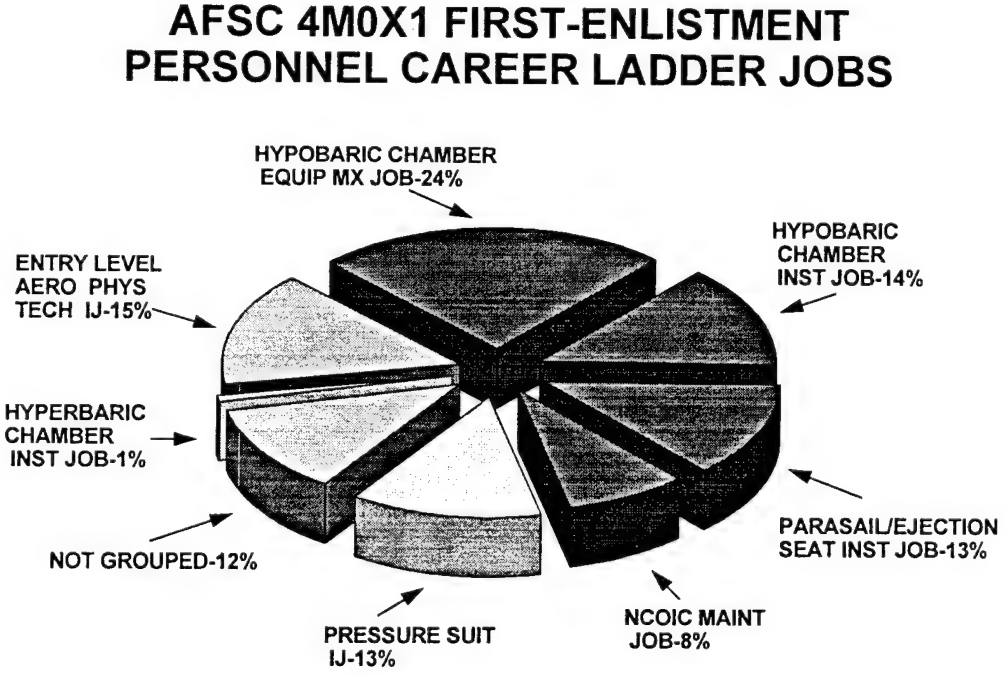

FIGURE 2

TABLE 15

RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY FIRST-ENLISTMENT AFSC 4M0X1 PERSONNEL

DUTY AREA	PERCENT TIME SPENT
A ORGANIZING AND PLANNING	4
B DIRECTING AND CONTROLLING	1
C INSPECTING AND EVALUATING	1
D TRAINING	9
E PERFORMING ADMINISTRATIVE FUNCTIONS	10
F CONDUCTING AEROSPACE PHYSIOLOGY INSTRUCTION	16
G OPERATING OR MAINTAINING HYPOBARIC CHAMBERS	25
H PERFORMING HAAMS ACTIVITIES	*
I OPERATING OR MAINTAINING HYPERBARIC CHAMBERS	6
J PERFORMING ACTIVITIES ON LIFE SUPPORT EQUIPMENT	10
K PERFORMING PRESSURE SUIT ACTIVITIES	9
L OPERATING AND MAINTAINING AIRCRAFT EMERGENCY ESCAPE AND SPECIAL PHYSIOLOGICAL TRAINERS	6
M PERFORMING PHYSIOLOGY RESEARCH ACTIVITIES	3

* Denotes less than 1 percent

TABLE 16

REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT AFSC 4M0X1 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=132)
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	93
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	89
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	89
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	88
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	88
G 232	Treat chamber reactors for hypoxia	85
G 231	Treat chamber reactors for hyperventilation	80
G 230	Treat chamber reactors for claustrophobia or apprehension	75
J 273	Fit chamber students with flight helmets	70
J 272	Fit chamber students or patients with oxygen hoods or masks	69
F 178	Brief rapid decompression during chamber flights	69
D 92	Clean aerospace physiology equipment, training aids, and devices	68
G 208	Connect or disconnect high-pressure oxygen cylinders	68
J 269	Clean flight helmets or chamber students	61
G 229	Store high-pressure oxygen cylinders	53
G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness	52
J 277	Recharge chamber portable oxygen assemblies	52
E 131	Conduct tours of aerospace physiology facilities	51
F 207	Instruct treatment procedures for hypoxia	50
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	49

TABLE 17

EQUIPMENT ITEMS USED BY MORE THAN 20 PERCENT OF FIRST-ENLISTMENT AFSC 4M0X1 PERSONNEL

EQUIPMENT	1ST ENL (N=132)
VACUUM PUMP	74
COMPRESSOR	59
AUDIOVISUAL EQUIPMENT	58
WORD PROCESSING EQUIPMENT	52
CLASSROOM MOCKUP	46
STANDARD SCALE (12 TO 20 POUND PULL)	30
OXYGEN REGULATOR TEST EQUIPMENT	28

Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary task factors that can help training development personnel decide which tasks to emphasize for entry-level training. These ratings, based on the judgments of senior career ladder NCOs at operational units, provide a rank-ordering of those tasks considered important for airmen with 1-48 months TAFMS, members to learn (TE), and a measure of the relative difficulty of those tasks (TD). When combined with data on percentages of entry-level personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high percentages performing, may be more appropriately planned for OJT programs. Low task factor ratings may highlight tasks best omitted from training for new personnel. These decisions must be weighed against percentages of personnel performing tasks, command concerns, and criticality of tasks.

To assist training development personnel, AFOMS developed a computer program that uses these task factors and percentages of 1-48 months TAFMS personnel performing tasks to produce Automated Training Indicators (ATI). ATI correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 1, AETCR 52-22. ATI allow training developers to quickly focus attention on those tasks which are most likely to qualify for resident course consideration.

Tasks having the highest TE ratings for AFSC 4M0X1 personnel with 1-48 months TAFMS are listed in Table 18. Included for each task are percentages of 1-24 months TAFMS personnel performing the task (1st Job), percentages of 1-48 months TAFMS personnel performing the task (1st ENL), and TD ratings. As illustrated in the table, tasks with the highest TE ratings deal with hypobaric chamber flight crew duties most often performed by members in core jobs of the career field. Other tasks with high TE involve briefing subjects and providing classroom instruction.

Table 19 lists tasks having the highest TD ratings. The percentages of 1-24 months TAFMS, 1-48 months TAFMS, 5- skill level, 7- skill level personnel performing, and TE ratings are also included for each task. Many tasks with high TD deal with developing major programs such as training programs and associated materials. The majority of technical functions considered to be extremely difficult relate to pressure suit activities, such as isolating pressure suit oxygen regulator malfunctions and performing overhaul inspections of pressure suit controllers. Generally, there is a negative correlation between the TD and TE ratings of tasks shown; however, several tasks dealing with conducting classroom instruction on oxygen equipment have both high TE and TD ratings.

Various lists of tasks, accompanied by TE and TD ratings, are contained in the **TRAINING EXTRACT** package and should by reviewed in detail by technical school personnel. For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.

TABLE 18

TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

TASKS		TNG EMP	PERCENT MEMBERS PERFORMING 1ST JOB	1ST ENL	TSK DIFF
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	8.16	89	88	4.80
G 232	Treat chamber reactors for hypoxia	8.08	77	85	4.73
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	7.98	87	89	4.75
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	7.92	89	88	4.18
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	7.92	93	93	3.94
G 231	Treat chamber reactors for hyperventilation	7.90	72	80	4.63
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	7.88	85	89	4.04
G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness	7.59	39	52	5.67
G 230	Treat chamber reactors for claustrophobia or apprehension	7.47	67	75	4.99
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	7.39	31	49	4.63
G 208	Connect or disconnect high-pressure oxygen cylinders	7.35	64	68	3.34
J 268	Assemble life support equipment, such as oxygen masks	7.31	39	39	4.94
G 210	Perform daily inspections of hypobaric chamber assemblies	7.27	46	44	4.10
F 196	Conduct classroom instructions concerning use of oxygen masks	7.27	31	43	5.05
F 197	Conduct classroom instructions concerning use of oxygen regulators	7.25	28	40	5.25
F 178	Brief rapid decompression during chamber flights	7.25	54	69	4.47
F 194	Conduct classroom instructions concerning types of oxygen storage systems	7.22	30	41	5.39
F 176	Brief hypobaric chamber flight preflight oxygen equipment inspection procedures	7.16	28	43	4.31

TE MEAN = 2.77; S.D. = 2.02 (HIGH = 4.79)
TD MEAN = 5.00; S.D. = 1.00

TABLE 19

TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS		TSK DIFF	PERCENT MEMBERS PERFORMING 1ST JOB	1ST ENL	4M051	4M071	TNG EMP
D 105	Develop career development courses (CDCs)	7.78	0	0	1	1	.00
D 107	Develop formal course curricula, plans of instructions (POIs), or specialty training standards (STSs)	7.39	0	0	4	10	.12
K 296	Isolate pressure suit oxygen regulator malfunctions	7.30	5	5	7	1	1.92
A 11	Draft budget requirements	7.17	2	5	10	38	.51
K 305	Perform overhaul inspections of pressure suit controllers	7.16	8	5	4	1	1.86
K 295	Isolate pressure suit controller malfunctions	7.12	5	5	7	1	1.92
D 109	Draft command standard training packages	7.08	2	2	3	7	.10
K 331	Test and evaluate new or proposed pressure suit assemblies	7.02	2	4	4	1	1.24
K 306	Perform overhaul inspections of pressure suit oxygen regulators	7.01	3	2	4	2	1.86
K 303	Perform overhaul inspections of full pressure suits	6.99	15	11	10	2	1.92
C 85	Write recommendations for awards and decorations	6.93	0	0	15	75	.94
E 158	Participate in aircraft physiological incident investigations	6.87	2	1	0	3	.61
C 84	Write EPRs	6.82	0	0	24	82	1.20
K 293	Isolate full pressure suit malfunctions	6.79	8	7	9	2	1.90
C 63	Evaluate budget requirements	6.77	0	2	8	37	.63
K 285	Calibrate pressure suit test equipment	6.76	15	8	7	1	1.75
D 124	Write job qualification standards	6.63	2	1	2	15	.14
M 372	Calibrate automatic controllers on research chambers	6.60	2	1	2	2	.98
M 394	Perform plumbing modifications to sealed environmental chambers	6.60	2	1	1	0	1.35
C 61	Develop USAF Graduate Evaluation Program forms or questionnaires	6.60	0	2	2	1	.08

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.77; S.D. = 2.02 (HIGH = 4.79)

Specialty Training Standard (STS) Analysis

A comprehensive review of the AFSC 4M0X1 draft STS, implemented October 1994, was made by comparing survey data to STS elements. To assist specifically in the examination of the STS, technical school personnel from the USAF School of Aerospace Medicine, located at Brooks AFB, matched JI tasks to appropriate sections and subsections of the STS. A complete listing, displaying percent members performing tasks, TE and TD ratings for each task, along with STS matching, has been forwarded to the technical school for use in further review of training documents. STS elements with performance objectives were reviewed in terms of TE, TD, and percent members performing information, using the guidance provided in AFI 36-2623 and AETCR 52-22. Typically, tasks performed by 20 percent or more personnel in appropriate experience or skill-level groups, such as first-enlistment (1-48 months TAFMS), and 5- and 7-skill level groups, should be considered for inclusion in the STS. Likewise, tasks with less than 20 percent performing in all of these groups should be considered for deletion from the STS.

Review of the draft STS showed numerous items were unsupported by survey data. A sampling of unsupported items, along with accompanying job inventory tasks and survey data, is listed in Table 20. STS items dealing with inspecting spatial disorientation and ejection seat trainers and maintaining full pressure suits and associated equipment were widely unsupported. The lack of STS support is due to the diverse nature of the career field. Personnel working in the pressure suit technician job, for example, may perform duties distinctly different from members performing more conventional hypobaric chamber crew positions. For this reason, most of the pressure suit training is administered at Beale AFB. Training personnel and SMEs should review unsupported STS items listed in Table 20, as well as accompanying training documents, to determine if inclusion in future revisions is warranted.

Tasks not matched to any element of the STS are listed at the end of the computer listing located in associated training documents. These were reviewed to determine if any tasks concentrate around particular functions or jobs. Many of the unreferenced tasks are managerial or supervisory in nature and not normally matched to an STS. A sample of technical tasks, performed by 20 percent or more criterion group members, not referenced to the STS, is listed in Table 21. Training personnel should review these and other unreferenced tasks to determine if STS inclusion is necessary.

Plan of Instruction (POI) Analysis

Technical school SMEs matched JI tasks to POI 3ABY4M031-001, dated 15 October 1990, training objectives. Objectives were evaluated in a method similar to the STS analysis, as percent members performing data for first-job (1-24 months TAFMS) and first-enlistment (1-48 months TAFMS) personnel, TE, and TD ratings were examined.

TABLE 20

EXAMPLES OF STS ITEMS NOT SUPPORTED BY SURVEY DATA

STS ITEMS/TASKS		PERCENT MEMBERS PERFORMING					
		TNG EMP	1ST JOB	1ST ENL	4M051	4M071	TSK DIFF
7b(1).	**Vertigon inspections - Perform daily**						
L 347	Perform daily inspections of spatial disorientation trainers	4.14	8	13	12	15	3.84
7d(1).	**Night vision trainer inspections - Perform daily**						
L 344	Perform daily inspections of night vision trainers	4.71	8	14	16	15	3.64
12I(4).	**Custom oxygen masks - Construct mask molds from face casts**						
J 270	Construct custom-fitted oxygen masks	3.25	5	6	8	5	5.96
14c(1).	**MH-15 Ejection Seat - Perform daily inspections**						
L 343	Perform daily inspections of live-fire ejection seat trainers	4.14	3	8	9	3	4.36

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.77; S.D. = 2.02 (HIGH = 4.79)

TABLE 20 (CONTINUED)

EXAMPLES OF STS ITEMS NOT SUPPORTED BY SURVEY DATA

STS ITEMS/TASKS		TNG EMP	PERCENT MEMBERS PERFORMING 1ST JOB	1ST ENL	4M051	4M071	TSK DIFF
16a(4)(C).	**Full pressure suits - Overhaul**						
K 303	Perform overhaul inspections of full pressure suits	1.92	15	11	10	2	6.99
16a(7).	**Size, fit and adjust full pressure suits**						
K 329	Size and fit full pressure suits	2.37	8	8	7	0	6.33
K 283	Adjust full pressure suits	2.33	11	8	7	2	6.13
16e(5)(a).	**Low flight regulators - Perform periodic inspections**						
K 308	Perform periodic inspections of low-flight oxygen regulators	2.06	10	6	3	0	5.54
16e(5)(b).	**Low flight regulators - Overhaul/troubleshoot/repair**						
K 304	Perform overhaul inspections of low-flight oxygen regulators	1.86	5	3	2	0	6.14

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.77; S.D. = 2.02 (HIGH = 4.79)

TABLE 20 (CONTINUED)

EXAMPLES OF STS ITEMS NOT SUPPORTED BY SURVEY DATA

STS ITEMS/TASKS		PERCENT MEMBERS PERFORMING					
		TNG EMP	1ST JOB	1ST ENL	4M051	4M071	TSK DIFF
16g(3)(b).	**LOX procedures - Fill hand-held ventilator**						
K 289	Fill portable liquid oxygen (LOX) ventilation units	2.27	16	12	11	2	5.10
20a.	**Hyperbaric maintenance - Perform daily, periodic and special inspections and maintenance on hyperbaric chamber systems and ancillary equipment**						
I 249	Perform daily inspections of hyperbaric chamber assemblies	4.35	10	13	18	15	4.22
I 255	Perform special inspections of hyperbaric chamber assemblies	3.53	2	5	8	9	5.59
20c.	**Hyperbaric maintenance - Perform basic troubleshooting procedures on hyperbaric chamber systems**						
I 251	Perform general maintenance on hyperbaric chamber assemblies	4.14	7	10	13	9	4.78
25c(3).	**Parasail operations - Perform tow driver duties**						
L 368	Serve as truck driver on parachute familiarization training teams	2.86	0	2	9	13	5.80

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.77; S.D. = 2.02 (HIGH = 4.79)

TABLE 21

TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE
CRITERION GROUP PERSONNEL AND NOT REFERENCED TO THE STS

TASKS		PERCENT MEMBERS PERFORMING					
		TNG EMP	1ST JOB	1ST ENL	4M051	4M071	TSK DIFF
G 229	Store high-pressure oxygen cylinders	6.94	56	53	58	52	2.82
F 189	Conduct classroom instruction concerning night vision principles and problems	6.35	11	27	44	44	4.98
D 92	Clean aerospace physiology equipment, training aids, and devices	5.82	57	68	66	51	2.63
E 151	Maintain precision measurement equipment (PME) calibration schedules	4.71	11	11	16	20	3.61
E 165	Solder wiring	4.65	8	15	21	22	4.05
E 166	Store equipment, tools, or supplies	4.45	23	27	39	38	2.53
G 209	Escort students to flight surgeon's office following adverse chamber reactions	4.18	21	30	37	39	2.15
D 97	Construct or develop training materials, aids, or devices	4.06	7	19	31	45	5.47
E 143	Issue or log turn-ins of equipment, tools, or supplies	3.75	7	10	18	24	3.48
E 163	Review student critiques	3.67	26	36	48	62	2.81
E 171	Write minutes of meetings, briefings, or conferences	2.94	18	20	25	34	3.98

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.77; S.D. = 2.02 (HIGH = 4.79)

POI blocks, units of instruction, and criterion objectives were compared against guidance provided by AETCR 52-22 (30 percent or more criterion first-enlistment group performing trained tasks). In accordance with this guidance, tasks trained in the course not meeting these criteria should be considered for elimination from formal course training if not justified on some other acceptable basis.

POI analysis reveals fewer unsupported objectives than exhibited in the STS analysis. A sample of unsupported objectives is listed in Table 22. Four of these unsupported objectives deal with emergency egress principles, while the remaining objectives deal with the principles of aircraft pressurization and pressure suit utilization.

Many technical tasks, performed by over 30 percent of first-enlistment personnel, were not matched to the POI. Examples of these tasks with survey data are listed in Table 23. The majority of these tasks involve conducting aerospace physiology instruction and operating hyperbaric chambers. Training personnel and SMEs should review these and other unreferenced tasks to determine if these areas should be incorporated into the formal course.

JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can be very useful for career ladder managers as they attempt to determine possible factors affecting job performance of career ladder airmen. Job satisfaction data can be expanded to provide indications of general attitudes within specific DAFSC groups.

With this in mind, job satisfaction responses for AFSC 4M0X1 personnel were analyzed and provide the following comparisons: (1) among TAFMS groups of the AFSC 4M0X1 career ladder and a comparative sample of medical personnel surveyed in 1993 and (2) between current and previous AFSC 4M0X1 respondents.

Table 24 shows the comparison of TAFMS group data of AFSC 4M0X1 respondents to a comparative sample of other medical career ladders surveyed the previous year. These data provide a relative measure of how AFSC 4M0X1 personnel job satisfaction responses compare with similar Air Force specialties. Generally, Aerospace Physiology personnel are slightly more satisfied with their jobs than members of a comparative sample. The 49-96 months TAFMS Aerospace Physiology respondents feel their training is not utilized as well, but are much more likely to reenlist than their counterparts. The members of both 1-48 months TAFMS groups are less likely to reenlist than members of any other TAFMS group. Overall, members of both the current and comparative samples seem to be relatively satisfied with their jobs.

An indication of changes in job satisfaction perceptions within the career ladder over time is provided in Table 25 which compares TAFMS group data for current survey respondents to

TABLE 22

EXAMPLES OF POI ITEMS NOT SUPPORTED BY SURVEY DATA

POI OBJECTIVES/TASK		TNG EMP	PERCENT MEMBERS PERFORMING 1ST JOB	1ST ENL	TSK DIFF
XI 1a.	**Identify the principles of aircraft emergency escape systems.**				
F 188	Conduct classroom instruction concerning in-flight egress escape procedures	5.82	3	16	5.45
F 177	Brief in-flight egress procedures	5.41	15	28	5.15
XI 2a.	**Identify the proper ejection sequence produced IAW the MH-15 trainer checklist**				
F 179	Brief use of ejection seat trainers	4.90	15	17	4.75
L 338	Operate live-fire ejection seat trainers	4.35	10	16	5.35
XI 4a.	**Identify the factors that determine aircraft crash survivability**				
F 186	Conduct classroom instruction concerning crash survival	5.59	3	17	5.47

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.77; S.D. = 2.02 (HIGH = 4.79)

TABLE 22 (CONTINUED)

EXAMPLES OF POI ITEMS NOT SUPPORTED BY SURVEY DATA

POI OBJECTIVES/TASK		TNG EMP	PERCENT MEMBERS PERFORMING 1ST JOB	1ST ENL	TSK DIFF
XI 5a.	**Perform four parachute landing falls (front, rear, right, and left) from the Swing Landing Trainer with a maximum of three attempts allowed from each direction**				
F 199	Conduct parachute landing fall (PLF) training	4.65	15	25	5.19
L 334	Instruct and evaluate students on PLF platforms	4.18	10	19	4.97
XII 1a.	**Identify the principles and physiological effects of aircraft pressurization**				
F 185	Conduct classroom instructions concerning aircraft pressurization principles and problems	6.61	10	23	5.10
XIII 1a.	**Identify the evolution, purpose, operating principles and consequences of using pressure suits**				
F 191	Conduct classroom instruction concerning pressure suit principles	3.55	0	1	6.11

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.77; S.D. = 2.02 (HIGH = 4.79)

TABLE 23

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE FIRST-ENLISTMENT PERSONNEL AND NOT REFERENCED TO THE POI

TASKS		PERCENT MEMBERS PERFORMING			
		TNG EMP	1ST JOB	1ST ENL	TSK DIFF
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	7.39	31	49	4.63
F 178	Brief rapid decompression during chamber flights	7.25	54	69	4.47
F 173	Brief chamber flight preflight or postflight procedures	6.94	31	44	4.79
G 226	Serve as lecturer observer during hypobaric chamber flights , other than research flights	6.75	31	44	5.53
F 182	Brief use of spatial disorientation trainers	6.20	31	45	4.32
D 92	Clean aerospace physiology equipment, training aids, and devices	5.82	57	68	2.63
G 213	Perform oxygen flow checks of A-14 pressure-demand oxygen regulators	5.75	34	33	4.13
I 261	Serve as chamber operator during hyperbaric chamber dives	5.02	34	37	5.11
I 262	Serve as crew chief and lock operator during hyperbaric chamber dives	4.96	33	36	5.22
I 266	Serve as timekeeper during hyperbaric chamber dives	4.92	31	36	5.07
J 268	Assemble life support equipment, such as oxygen masks	4.92	34	37	4.95
I 263	Serve as inside observer during hyperbaric chamber dives	4.82	30	34	5.42

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.77; S.D. = 2.02 (HIGH = 4.79)

that of previous survey respondents. The current AFSC 4M0X1 respondents seem about as satisfied with their jobs as those respondents surveyed in 1988. The current survey 1-48 months TAFMS group members exhibit less interest in their jobs, but feel their training is better utilized. The current 49-96 months TAFMS group members also exhibit less job interest but are equally satisfied with their training utilization. They do, however, feel their talents are utilized more effectively. The current 97+ months TAFMS personnel are much happier with the way their training is utilized and are slightly more likely to reenlist.

Finally, job satisfaction data for identified jobs are provided in Table 26. Generally, job satisfaction data are high for personnel across all identified jobs. Only the Hypobaric Chamber Instructor and Research Chamber job members express a slight disinterest in their jobs. The members of these two jobs, along with the Hyperbaric Chamber job members, are also less satisfied with the way their talents are utilized. The Research Chamber job members, once again, along with the Training personnel, do not feel their training is utilized adequately. Only the Hypobaric Chamber Instructor job members do not gain a great sense of accomplishment from their work. The Hypobaric Equipment Maintenance job, Hypobaric Chamber Instructor job, Hyperbaric Chamber job, and Superintendent job personnel are the survey members least likely to reenlist.

Summary

Overall, AFSC 4M0X1 members are as satisfied with their jobs as members of a comparative sample of medical career ladder personnel. Furthermore, members of the current sample are as satisfied with their jobs as previous AFSC 4M0X1 (formerly AFSC 911X0) personnel surveyed in 1988. Job satisfaction data of specific career ladder jobs members show most job members are satisfied with their work. Only the Hypobaric Chamber Instructor and Research Chamber job incumbents feel their talents are not being properly utilized and their work is not particularly interesting.

TABLE 24

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 4M0X1
TAFMS GROUPS IN CURRENT STUDY TO A COMPARATIVE SAMPLE
(PERCENT MEMBERS RESPONDING)**

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	AFSC 4M0X1 (N=132)	COMP SAMPLE (N=341)	AFSC 4M0X1 (N=78)	COMP SAMPLE (N=231)	AFSC 4M0X1 (N=149)	COMP SAMPLE (N=387)
EXPRESSED JOB INTEREST:						
INTERESTING	80	78	82	81	84	82
SO-SO	13	12	14	14	9	11
DULL	7	10	4	5	7	7
PERCEIVED USE OF TALENTS:						
FAIRLY WELL TO PERFECT	84	83	90	83	83	86
NONE TO VERY LITTLE	16	17	10	17	17	14
PERCEIVED USE OF TRAINING:						
FAIRLY WELL TO PERFECT	95	89	83	90	87	89
NONE TO VERY LITTLE	5	11	17	10	13	11
SENSE OF ACCOMPLISHMENT FROM JOB:						
SATISFIED	77	72	79	72	83	73
NEUTRAL	17	9	13	12	5	9
DISSATISFIED	6	19	8	16	12	18
REENLISTMENT INTENTIONS:						
YES OR PROBABLY YES	60	52	82	67	76	78
NO OR PROBABLY NO	40	48	18	32	6	8
WILL RETIRE	0	0	0	1	18	14

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

Comparative data are from AFSCs 4J0X2 and 4P0X1 surveyed in 1993

TABLE 25

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 4M0X1
TAFMS GROUPS IN CURRENT STUDY TO PREVIOUS STUDY
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	AFSC 4M0X1 (N=132)	1988 AFSC 911X0 (N=180)	AFSC 4M0X1 (N=78)	1988 AFSC 911X0 (N=88)	AFSC 4M0X1 (N=149)	1988 AFSC 911X0 (N=129)
EXPRESSED JOB INTEREST:						
INTERESTING	80	86	82	88	84	83
SO-SO	13	9	14	8	9	10
DULL	7	4	4	3	7	6
PERCEIVED USE OF TALENTS:						
FAIRLY WELL TO PERFECT	84	85	90	84	83	82
NONE TO VERY LITTLE	16	14	10	16	17	18
PERCEIVED USE OF TRAINING:						
FAIRLY WELL TO PERFECT	95	89	83	82	87	78
NONE TO VERY LITTLE	5	11	17	18	13	22
SENSE OF ACCOMPLISHMENT FROM JOB:						
SATISFIED	77	81	79	82	83	72
NEUTRAL	17	9	13	6	5	9
DISSATISFIED	6	10	8	12	12	19
REENLISTMENT INTENTIONS:						
YES OR PROBABLY YES	60	59	82	82	76	73
NO OR PROBABLY NO	40	40	18	18	6	8
WILL RETIRE	0	*	0	0	18	19

* Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

TABLE 26

JOB SATISFACTION INDICATORS FOR AFSC 4M0X1 JOBS
(PERCENT MEMBERS RESPONDING)

	ENTRY LEVEL JOB (N=22)	AERO PHYS TECHNICIAN CLUSTER (N=243)	HYPOBARIC EQUIPMENT MAINTENANCE (N=45)	HYPOBARIC CHAMBER INSTRUCTOR (N=29)	PARASAIL/ EJECTION SEAT INSTRUCTOR (N=60)	NCOIC OPERATIONS (N=53)
EXPRESSED JOB INTEREST:						
INTERESTING	86	79	76	62	80	91
SO-SO	0	14	16	31	15	6
DULL	14	6	9	7	3	4
PERCEIVED USE OF TALENTS:						
FAIRLY WELL TO PERFECT	91	85	87	65	89	93
NONE TO VERY LITTLE	9	14	13	34	11	7
PERCEIVED USE OF TRAINING:						
FAIRLY WELL TO PERFECT	100	93	96	86	97	91
NONE TO VERY LITTLE	0	7	4	14	3	9
SENSE OF ACCOMPLISHMENT FROM JOB:						
SATISFIED	77	81	78	62	78	92
NEUTRAL	9	11	16	31	8	2
DISSATISFIED	14	8	7	7	13	6
REENLISTMENT INTENTIONS:						
YES OR PROBABLY YES	77	72	53	59	73	79
NO OR PROBABLY NO	23	19	44	38	18	2
WILL RETIRE	0	8	2	3	8	19

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

TABLE 26 (CONTINUED)

JOB SATISFACTION INDICATORS FOR AFSC 4M0X1 JOBS
(PERCENT MEMBERS RESPONDING)

	NCOIC MAINTENANCE (N=51)	HYPERBARIC EQUIPMENT MAINTENANCE (N=6)	HYPERBARIC CHAMBER (N=9)	RESEARCH CHAMBER (N=5)	PRESSURE SUIT (N=29)	TRAINING (N=6)	SUPERINTENDENT (N=12)
EXPRESSED JOB INTEREST:							
INTERESTING	80	83	100	60	86	100	83
SO-SO	10	0	0	40	10	0	17
DULL	8	17	0	0	3	0	0
PERCEIVED USE OF TALENTS:							
FAIRLY WELL TO PERFECT	83	84	67	60	82	100	92
NONE TO VERY LITTLE	16	16	33	40	17	0	8
PERCEIVED USE OF TRAINING:							
FAIRLY WELL TO PERFECT	94	100	78	60	76	67	83
NONE TO VERY LITTLE	6	0	22	40	24	33	17
SENSE OF ACCOMPLISHMENT FROM JOB:							
SATISFIED	86	83	78	80	79	100	75
NEUTRAL	6	0	11	0	10	0	25
DISSATISFIED	6	17	11	20	10	0	0
REENLISTMENT INTENTIONS:							
YES OR PROBABLY YES	88	83	67	80	69	83	67
NO OR PROBABLY NO	8	17	22	20	31	17	0
WILL RETIRE	2	0	11	0	0	0	33

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

IMPLICATIONS

This survey was conducted pri..arily to provide training personnel with current information on the Aerospace Physiology specialty for use in reviewing current training programs and training documents. Results indicate that the jobs have changed little since the last survey in 1988, and members follow a typical career progression pattern. The present classification structure, as described in AFM 36-2108 *Specialty Descriptions*, accurately portrays the jobs in this study.

Analysis of career ladder documents indicates numerous areas of the STS are unsupported by survey data. The POI is more in tune with survey data than the STS; however, both documents should be reviewed by career field functional managers and technical training SMEs.

No serious job satisfaction problems appear to exist in this specialty. Overall, AFSC 4M0X1 members are as satisfied with their jobs as members of a comparative sample of medical career ladder personnel, and current personnel are generally as positive about their jobs as previous AFSC 4M0X1 (formerly AFSC 911X0) personnel surveyed in 1988.

The findings of this OSR come directly from survey data collected from AFSC 4M0X1 personnel worldwide. These data are readily available to training and utilization personnel, functional managers, and other interested parties. Much of the data are compiled into extracts which are excellent tools in the decision-making process. These data extracts should be used when training or utilization decisions are made.

APPENDIX A

SELECTED REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF CAREER LADDER JOBS

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TABLE A1

ENTRY LEVEL AEROSPACE PHYSIOLOGY TECHNICIAN
INDEPENDENT JOB
(STG 32, N=22)

TASKS		PERCENT MEMBERS PERFORMING
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	100
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	100
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	95
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	91
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	86
G 232	Treat chamber reactors for hypoxia	77
J 272	Fit chamber students or patients with oxygen hoods or masks	68
J 273	Fit chamber students with flight helmets	68
G 230	Treat chamber reactors for claustrophobia or apprehension	68
G 231	Treat chamber reactors for hyperventilation	68
D 123	Schedule students for aerospace physiology training classes	64
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	64
J 269	Clean flight helmets of chamber students	59
G 208	Connect or disconnect high-pressure oxygen cylinders	59
F 178	Brief rapid decompression during chamber flights	55
E 144	Maintain administrative files	50
D 92	Clean aerospace physiology equipment, training aids, and devices	50
I 262	Serve as crew chief and lock operator during hyperbaric chamber dives	45
I 261	Serve as chamber operator during hyperbaric chamber dives	45
I 266	Serve as timekeeper during hyperbaric chamber dives	45
I 265	Serve as recorder during hyperbaric chamber dives	45
I 264	Serve as lock operator during hyperbaric chamber dives	45
E 131	Conduct tours of aerospace physiology facilities	45
G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness	45
I 263	Serve as inside observer during hyperbaric chamber dives	41

TABLE A2

AEROSPACE PHYSIOLOGY TECHNICIAN
JOB CLUSTER
(STG 20, N=243)

TASKS		PERCENT MEMBERS PERFORMING
G 232	Treat chamber reactors for hypoxia	95
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	94
G 231	Treat chamber reactors for hyperventilation	93
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	92
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	92
F 178	Brief rapid decompression during chamber flights	91
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	91
G 230	Treat chamber reactors for claustrophobia or apprehension	89
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	87
F 173	Brief chamber flight preflight or postflight procedures	82
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	81
G 226	Serve as lecturer observer during hypobaric chamber flights, other than research flights	81
J 273	Fit chamber students with flight helmets	79
G 208	Connect or disconnect high-pressure oxygen cylinders	78
F 176	Brief hypobaric chamber flight preflight oxygen equipment inspection procedures	77
G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness	77
F 207	Instruct treatment procedures for hypoxia	77
J 272	Fit chamber students or patients with oxygen hoods or masks	77
F 206	Instruct treatment procedures for hyperventilation	75
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	72
E 131	Conduct tours of aerospace physiology facilities	70
F 196	Conduct classroom instructions concerning use of oxygen masks	69
F 194	Conduct classroom instructions concerning types of oxygen storage systems	69

TABLE A3

HYPOBARIC CHAMBER EQUIPMENT
MAINTENANCE JOB
(STG 47, N=45)

TASKS		PERCENT MEMBERS PERFORMING
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	100
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	98
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	98
G 210	Perform daily inspections of hypobaric chamber assemblies	93
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	91
G 211	Perform general maintenance on hypobaric chambers	91
J 272	Fit chamber students or patients with oxygen hoods or masks	91
J 273	Fit chamber students with flight helmets	91
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	91
G 232	Treat chamber reactors for hypoxia	91
J 269	Clean flight helmets of chamber students	89
G 208	Connect or disconnect high-pressure oxygen cylinders	89
J 277	Recharge chamber portable oxygen assemblies	89
G 229	Store high-pressure oxygen cylinders	89
J 276	Purge chamber portable oxygen assemblies	89
G 231	Treat chamber reactors for hyperventilation	89
G 214	Perform oxygen flow checks of narrow panel pressure-demand oxygen regulators	87
J 268	Assemble life support equipment, such as oxygen masks	84
J 279	Remove or replace oxygen mask components for chamber students	84
E 127	Annotate inspection or maintenance forms	82
J 281	Store oxygen equipment	82
J 275	Perform periodic inspections of oxygen masks	80
G 230	Treat chamber reactors for claustrophobia or apprehension	80
E 128	Annotate records on status or inspections of equipment	78
F 178	Brief rapid decompression during chamber flights	78
G 212	Perform general maintenance on vacuum pumps	78
D 92	Clean aerospace physiology equipment, training aids, and devices	76

TABLE A4

HYPOBARIC CHAMBER INSTRUCTOR JOB
(STG 43, N=29)

TASKS		PERCENT MEMBERS PERFORMING
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	97
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	97
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	97
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	97
G 232	Treat chamber reactors for hypoxia	97
F 178	Brief rapid decompression during chamber flights	97
G 231	Treat chamber reactors for hyperventilation	93
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	90
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	90
F 173	Brief chamber flight preflight or postflight procedures	86
F 176	Brief hypobaric chamber flight preflight oxygen equipment inspection procedures	86
G 230	Treat chamber reactors for claustrophobia or apprehension	86
G 226	Serve as lecturer observer during hypobaric chamber flights, other than research flights	83
F 207	Instruct treatment procedures for hypoxia	83
F 206	Instruct treatment procedures for hyperventilation	83
F 195	Conduct classroom instructions concerning use of continuous-flow passenger oxygen systems	83
F 196	Conduct classroom instructions concerning use of oxygen masks	79
F 194	Conduct classroom instructions concerning types of oxygen storage systems	79
E 131	Conduct tours of aerospace physiology facilities	76
F 197	Conduct classroom instructions concerning use of oxygen regulators	72
D 92	Clean aerospace physiology equipment, training aids, and devices	72
E 163	Review student critiques	72

TABLE A5

PARASAIL/EJECTION SEAT
INSTRUCTOR JOB
(STG 69, N=60)

TASKS		PERCENT MEMBERS PERFORMING
F 178	Brief rapid decompression during chamber flights	98
G 232	Treat chamber reactors for hypoxia	97
G 231	Treat chamber reactors for hyperventilation	97
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	95
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	95
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	95
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	95
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	93
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	93
F 173	Brief chamber flight preflight or postflight procedures	92
G 226	Serve as lecturer observer during hypobaric chamber flights, other than research flights	90
G 230	Treat chamber reactors for claustrophobia or apprehension	90
F 176	Brief hypobaric chamber flight preflight oxygen equipment inspection procedures	87
F 207	Instruct treatment procedures for hypoxia	85
F 199	Conduct parachute landing fall (PLF) training	83
F 181	Brief use of personal protective equipment	83
F 206	Instruct treatment procedures for hyperventilation	83
G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness	82
F 182	Brief use of spatial disorientation trainers	80
F 177	Brief in-flight egress procedures	78
F 196	Conduct classroom instructions concerning use of oxygen masks	77
G 208	Connect or disconnect high-pressure oxygen cylinders	77
F 175	Brief ground egress escape procedures	75
F 194	Conduct classroom instructions concerning types of oxygen storage systems	75

TABLE A6

NCOIC OPERATIONS JOB
(STG 50, N=53)

TASKS		PERCENT MEMBERS PERFORMING
G 232	Treat chamber reactors for hypoxia	94
G 231	Treat chamber reactors for hyperventilation	94
G 230	Treat chamber reactors for claustrophobia or apprehension	94
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	92
A 12	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	92
A 10	Develop work procedures	92
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	91
A 5	Determine or establish work priorities	91
G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness	91
A 21	Plan or prepare briefings	89
A 22	Plan or schedule work assignments or priorities	87
A 13	Establish performance standards for subordinates	87
C 58	Conduct performance feedback worksheet (PFW) evaluation sessions	87
B 36	Counsel personnel on personal or military-related matters	85
F 178	Brief rapid decompression during chamber flights	85
C 84	Write EPRs	83
A 15	Establish work methods, controls, or inspection procedures	83
A 16	Establish work schedules	81
C 73	Evaluate personnel for compliance with performance standards	81
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	81
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	81
C 85	Write recommendations for awards and decorations	79
G 226	Serve as lecturer observer during hypobaric chamber flights, other than research flights	79
C 81	inspect personnel for compliance with military standards	79
B 32	Conduct supervisory orientations of newly assigned personnel	79
F 173	Brief chamber flight preflight or postflight procedures	77

TABLE A7

NCOIC MAINTENANCE JOB
(STG 61, N=51)

TASKS		PERCENT MEMBERS PERFORMING
F 173	Brief chamber flight preflight or postflight procedures	100
G 226	Serve as lecturer observer during hypobaric chamber flights, other than research flights	100
F 180	Brief use of emergency and portable oxygen systems during hypobaric chamber flights	100
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	100
F 178	Brief rapid decompression during chamber flights	100
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	100
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	100
J 273	Fit chamber students with flight helmets	100
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	98
G 232	Treat chamber reactors for hypoxia	98
F 176	Brief hypobaric chamber flight preflight oxygen equipment inspection procedures	96
F 207	Instruct treatment procedures for hypoxia	96
F 206	Instruct treatment procedures for hyperventilation	96
J 272	Fit chamber students or patients with oxygen hoods or masks	96
G 231	Treat chamber reactors for hyperventilation	96
G 230	Treat chamber reactors for claustrophobia or apprehension	96
G 224	Serve as crew chief during hypobaric chamber flights, other than research flights	94
G 229	Store high-pressure oxygen cylinders	94
G 208	Connect or disconnect high-pressure oxygen cylinders	94
F 197	Conduct classroom instructions concerning use of oxygen regulators	92
D 92	Clean aerospace physiology equipment, training aids, and devices	90
F 196	Conduct classroom instructions concerning use of oxygen masks	90
F 194	Conduct classroom instructions concerning types of oxygen storage systems	90
J 269	Clean flight helmets of chamber students	90

TABLE A8

HYPERBARIC CHAMBER MAINTENANCE
INDEPENDENT JOB
(STG 31, N=6)

TASKS		PERCENT MEMBERS PERFORMING
B 38	Direct equipment maintenance or utilization	100
E 166	Store equipment, tools, or supplies	100
E 127	Annotate inspection or maintenance forms	100
E 134	Coordinate maintenance or supply matters with appropriate agencies	100
E 129	Compile information for records, reports, or logs	100
E 154	Maintain records on status or inspections of equipment	100
A 18	Plan equipment or facility maintenance requirements	100
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	100
E 142	Inventory equipment, tools, or supplies	100
A 12	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	100
A 10	Develop work procedures	100
A 3	Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	100
J 281	Store oxygen equipment	100
E 146	Maintain documentation on items requiring periodic inspections	83
E 128	Annotate records on status or inspections of equipment	83
E 133	Coordinate maintenance of equipment with appropriate agencies	83
C 69	Evaluate logistics requirements, such as personnel, equipment, space, tools, or supplies	83
A 5	Determine or establish work priorities	83
C 82	Perform safety inspections of facilities or equipment	83
J 272	Fit chamber students or patients with oxygen hoods or masks	83
I 245	Charge compressed-air flasks	83
J 274	Inspect pressure-demand oxygen components	83
C 75	Evaluate procedures for storage, inventory, or inspection of property items	83
I 250	Perform daily inspections of low-pressure compressors	83
J 277	Recharge chamber portable oxygen assemblies	83
C 58	Conduct performance feedback worksheet (PFW) evaluation sessions	67

TABLE A9

HYPERBARIC CHAMBER
INDEPENDENT JOB
(STG 30, N=9)

TASKS		PERCENT MEMBERS PERFORMING
I 248	Load or remove patients in hyperbaric chambers	100
I 262	Serve as crew chief and lock operator during hyperbaric chamber dives	100
I 261	Serve as chamber operator during hyperbaric chamber dives	100
I 263	Serve as inside observer during hyperbaric chamber dives	100
I 246	Clean hyperbaric chambers	100
J 272	Fit chamber students or patients with oxygen hoods or masks	78
I 264	Serve as lock operator during hyperbaric chamber dives	78
I 249	Perform daily inspections of hyperbaric chamber assemblies	78
J 281	Store oxygen equipment	78
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	78
E 144	Maintain administrative files	67
I 265	Serve as recorder during hyperbaric chamber dives	67
I 266	Serve as timekeeper during hyperbaric chamber dives	67
E 140	Initiate requests for hazardous duty orders	67
I 245	Charge compressed-air flasks	67
E 152	Maintain publication libraries or files	67
E 156	Maintain stock levels of blank forms	67
I 250	Perform daily inspections of low-pressure compressors	56
E 135	Distribute aerospace physiology records or reports	44
A 22	Plan or schedule work assignments or priorities	44
F 198	Conduct hyperbaric chamber team training	44
E 129	Compile information for records, reports, or logs	44
E 131	Conduct tours of aerospace physiology facilities	44
E 166	Store equipment, tools, or supplies	44
A 21	Plan or prepare briefings	44
D 92	Clean aerospace physiology equipment, training aids, and devices	33
I 251	Perform general maintenance on hyperbaric chamber assemblies	33
A 1	Assign personnel to duty positions	33
I 267	Take periodic samples of air in compressed-air flasks	33
J 268	Assemble life support equipment, such as oxygen masks	33

TABLE A10

RESEARCH CHAMBER
INDEPENDENT JOB
(STG 22, N=5)

TASKS		PERCENT MEMBERS PERFORMING
M 421	Size and fit research subjects with oxygen equipment	100
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	100
M 410	Serve as chamber operator during research chamber flights	80
M 413	Serve as inside observer during research chamber flights	80
M 416	Serve as outside observer during research chamber flights	80
M 418	Serve as recorder during research chamber flights	80
G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness	80
F 173	Brief chamber flight preflight or postflight procedures	80
G 208	Connect or disconnect high-pressure oxygen cylinders	80
M 412	Serve as crew chief during research chamber flights	60
M 414	Serve as lock operator during research chamber flights	60
E 131	Conduct tours of aerospace physiology facilities	60
A 10	Develop work procedures	60
G 232	Treat chamber reactors for hypoxia	60
G 231	Treat chamber reactors for hyperventilation	60
G 230	Treat chamber reactors for claustrophobia or apprehension	60
M 403	Record experimental data	40
M 371	Calibrate analytical devices, such as flowmeters or recording equipment	40
A 12	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	40
A 16	Establish work schedules	40
M 380	Operate in-flight monitoring equipment	40
M 423	Test oxygen masks, pressure suits, or chemical defense gear for inboard leakages	40
G 213	Perform oxygen flow checks of A-14 pressure-demand oxygen regulators	40
J 273	Fit chamber students with flight helmets	40
J 277	Recharge chamber portable oxygen assemblies	40
J 276	Purge chamber portable oxygen assemblies	40
J 268	Assemble life support equipment, such as oxygen masks	40

TABLE A11

PRESSURE SUIT
INDEPENDENT JOB
(STG 37, N=29)

TASKS		PERCENT MEMBERS PERFORMING
K 287	Clean pressure suits	100
K 288	Connect or disconnect crewmembers to aircraft systems	93
K 316	Perform preflight or postflight inspections of full pressure suits	93
K 307	Perform periodic inspections of full pressure suits	93
K 300	Pack pressure suit assemblies for shipment	93
K 286	Cement pressure suit assemblies	93
I 261	Serve as chamber operator during hyperbaric chamber dives	93
K 289	Fill portable liquid oxygen (LOX) ventilation units	90
G 227	Serve as lock operator during hypobaric chamber flights, other than research flights	90
I 266	Serve as timekeeper during hyperbaric chamber dives	90
K 302	Perform occupied full pressure suit integration tests	86
K 322	Remove or replace full pressure suit components	86
K 284	Assemble or disassemble pressure suit hardware, such as neck rings or urine collection valves	86
G 223	Serve as chamber operator during hypobaric chamber flights, other than research flights	86
I 263	Serve as inside observer during hyperbaric chamber dives	86
I 264	Serve as lock operator during hyperbaric chamber dives	86
I 262	Serve as crew chief and lock operator during hyperbaric chamber dives	86
G 225	Serve as inside observer during hypobaric chamber flights, other than research flights	83
G 228	Serve as recorder during hypobaric chamber flights, other than research flights	83
I 265	Serve as recorder during hyperbaric chamber dives	83
K 303	Perform overhaul inspections of full pressure suits	79
J 273	Fit chamber students with flight helmets	76
G 232	Treat chamber reactors for hypoxia	72
K 317	Perform preflight or postflight inspections of low-flight oxygen regulators	69
K 293	Isolate full pressure suit malfunctions	69
G 208	Connect or disconnect high-pressure oxygen cylinders	69

TABLE A12

TRAINING
INDEPENDENT JOB
(STG 46, N=6)

TASKS		PERCENT MEMBERS PERFORMING
D 115	Evaluate progress of trainees	100
D 116	Evaluate training methods or techniques	100
D 120	Plan or schedule training	100
D 98	Counsel trainees on training progress	100
D 88	Administer or score training tests	100
D 96	Conduct training conferences or briefings	100
D 103	Determine student training schedules	100
D 97	Construct or develop training materials, aids, or devices	100
D 108	Develop or draft lesson plans	100
D 111	Evaluate effectiveness of training programs	83
D 99	Critique student test results with students	83
A 28	Schedule student training requirements	83
D 118	Maintain training instructor folders	83
D 119	Participate in training conferences or briefings	83
D 113	Evaluate or inspect training materials, aids, or devices for operation or suitability	83
D 121	Procure training aids, devices, space, or equipment	83
A 13	Establish performance standards for subordinates	83
D 100	Design student training literature	83
D 122	Review student training literature	83
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	83
E 131	Conduct tours of aerospace physiology facilities	83
D 94	Conduct OJT upgrade training	67
D 114	Evaluate personnel for training needs	67
D 112	Evaluate effectiveness of training, such as career knowledge upgrade, job proficiency upgrade, or qualification training	67
D 101	Determine OJT upgrade or resident course training requirements	67
E 163	Review student critiques	67
B 33	Coordinate class scheduling with affected organizations	67
D 104	Determine training requirements, other than OJT upgrade, resident course, or student training requirements	67

TABLE A13

SUPERINTENDENT
INDEPENDENT JOB
(STG 35, N=12)

TASKS		PERCENT MEMBERS PERFORMING
C 59	Conduct self-inspections	100
C 58	Conduct performance feedback worksheet (PFW) evaluation sessions	100
A 17	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	92
C 85	Write recommendations for awards and decorations	92
C 84	Write EPRs	92
A 5	Determine or establish work priorities	83
B 36	Counsel personnel on personal or military-related matters	83
C	Evaluate personnel for compliance with performance standards	83
C 74	Evaluate personnel for promotion, demotion, reclassification, or special awards	83
A 13	Establish performance standards for subordinates	83
A 26	Review drafts of regulations, manuals, or other directives	83
A 9	Develop self-inspection program checklists	75
C 80	Indorse enlisted performance reports (EPRs)	75
A 3	Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	75
B 42	Implement self-inspection programs	75
C 69	Evaluate logistics requirements, such as personnel, equipment, space, tools, or supplies	75
A 29	Write job or position descriptions	75
A 2	Assign sponsors for incoming personnel	75
B 45	Initiate actions required due to substandard performance of personnel	75
A 10	Develop work procedures	67
C 81	Inspect personnel for compliance with military standards	67
A 24	Plan self-inspection programs	67
B 31	Conduct staff meetings or briefings	67
B 48	Interpret policies, directives, or procedures for subordinates	67
F 178	Brief rapid decompression during chamber flights	67
A 27	Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	67

APPENDIX B

EXPANDED LISTING OF TASK MODULES AND TASK STATEMENTS

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These Task Modules (TMs) were developed in order to organize and summarize the extensive task information of this specialty. The TMs were developed by clustering tasks which are coperformed by the same incumbents. Coperformance is a measure of how probable a task will be performed with another task, based upon the responses of surveyed personnel. For example, if an individual performs one Supply Duty task, the probability is very high that he or she will perform other Supply Duty tasks. Thus, the group of Supply Duty tasks can be considered a "natural group" of associated or related tasks (see TM 0001 below). The statistical clustering generally approximates these "natural groupings."

The title of each TM is a best estimate as to the generic subject content of the group of tasks. The TMs are useful for organizing the task data into meaningful units and as a way to concisely summarize the extensive job data. However, TMs are only one way to organize the information. Other strategies may also be valid.

0001 ST0054 SUPPLY DUTIES

1	E 132	Coordinate local purchase of equipment or supplies with appropriate agencies
2	E 133	Coordinate maintenance of equipment with appropriate agencies
3	E 134	Coordinate maintenance or supply matters with appropriate agencies
4	E 137	Draft or write requisitions for equipment, tools, or supplies, other than for local purchase
5	E 138	Draft or write requisitions for local purchase of equipment, tools, or supplies
6	E 139	Identify supply problems
7	E 142	Inventory equipment, tools, or supplies
8	E 143	Issue or log turn-ins of equipment, tools, or supplies
9	E 145	Maintain base equipment or supply accounts
10	E 148	Maintain medical equipment or supply accounts
11	E 150	Maintain organizational equipment or supply records
12	E 159	Perform receiving inspections of incoming equipment
13	E 161	Research supply requisition data, such as supply catalogs or master cross-reference listings (MCRLs)
14	E 164	Screen defense reutilization and marketing office (DRMO) property
15	E 166	Store equipment, tools, or supplies
16	E 167	Trace lost physiological support equipment
17	E 168	Validate changes in equipment allowances or authorizations

18 E 169 Validate supply transaction listings or rosters, such as D-04, D-18, D-19, D-23, or M-30
19 E 170 Write letters of justification for supply-related matters

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0002 ST0062 PARACHUTE/EJECTION INSTRUCTION

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1 F 174 Brief ejection seat trainer pre-ejection procedures
2 F 179 Brief use of ejection seat trainers
3 F 184 Brief water survival procedures during which pressure suits are not worn
4 F 192 Conduct classroom instructions concerning self first aid training
5 F 193 Conduct classroom instructions concerning survival principles and procedures, other than crash survival
6 F 199 Conduct parachute landing fall (PLF) training
7 F 201 Evaluate student performances during live-fire ejection seat training
8 F 204 Instruct in-flight egress principles and procedures without use of procedural trainers
9 J 282 Store training aids, such as parachute harnesses, parachutes, radio equipment, or locator beacons
10 L 332 Instruct and evaluate students during descent and landing training
11 L 333 Instruct and evaluate students on parachute drag training devices
12 L 334 Instruct and evaluate students on PLF platforms
13 L 335 Load or unload parasail equipment
14 L 336 Operate air egress procedural trainers
15 L 337 Operate ground egress procedural trainers
16 L 338 Operate live-fire ejection seat trainers
17 L 363 Serve as canopy assistance operator on parachute familiarization training teams
18 L 364 Serve as crew chief on parachute familiarization training teams
19 L 365 Serve as hookup crewmember on swing landing trainers
20 L 366 Serve as landing zone supervisor on parachute familiarization training teams
21 L 367 Serve as release operator on parachute familiarization training teams
22 L 368 Serve as truck driver on parachute familiarization training teams

0003 ST0063 PRESSURE SUIT MAINTENANCE

1	K 283	Adjust full pressure suits
2	K 284	Assemble or disassemble pressure suit hardware, such as neck rings or urine collection valves
3	K 285	Calibrate pressure suit test equipment
4	K 286	Cement pressure suit assemblies
5	K 287	Clean pressure suits
6	K 288	Connect or disconnect crewmembers to aircraft systems
7	K 289	Fill portable liquid oxygen (LOX) ventilation units
8	K 290	Inspect emergency oxygen cylinders
9	K 291	Inspect pressure suit assemblies for shipment
10	K 293	Isolate full pressure suit malfunctions
11	K 294	Isolate portable LOX ventilation unit malfunctions
12	K 295	Isolate pressure suit controller malfunctions
13	K 296	Isolate pressure suit oxygen regulator malfunctions
14	K 297	Maintain benchstock of spare parts for pressure suits
15	K 298	Maintain pressure suit test equipment
16	K 299	Maintain transport van-installed equipment
17	K 300	Pack pressure suit assemblies for shipment
18	K 301	Perform daily inspections of LOX storage carts
19	K 302	Perform occupied full pressure suit integration tests
20	K 303	Perform overhaul inspections of full pressure suits
21	K 304	Perform overhaul inspections of low-flight oxygen regulators
22	K 305	Perform overhaul inspections of pressure suit controllers
23	K 306	Perform overhaul inspections of pressure suit oxygen regulators
24	K 307	Perform periodic inspections of full pressure suits
25	K 308	Perform periodic inspections of low-flight oxygen regulators
26	K 311	Perform periodic inspections of portable LOX ventilation units
27	K 312	Perform periodic inspections of pressure suit controllers
28	K 313	Perform periodic inspections of pressure suit oxygen regulators
29	K 314	Perform periodic inspections of pressure suit ventilation hose assemblies
30	315	Perform periodic inspections of transport van-installed equipment
31	K 316	Perform preflight or postflight inspections of full pressure suits

32	K 317	Perform preflight or postflight inspections of low-flight oxygen regulators
33	K 318	Perform preflight or postflight inspections of portable LOX ventilation units
34	K 320	Perform special inspections of full pressure suits
35	K 322	Remove or replace full pressure suit components
36	K 323	Remove or replace low-flight oxygen regulator components
37	K 324	Remove or replace portable LOX ventilation unit components
38	K 325	Remove or replace pressure suit controller components
39	K 326	Remove or replace pressure suit oxygen regulator components
40	K 327	Remove or replace pressure suit ventilation hose assembly components
41	K 328	Sew pressure suit assemblies
42	K 329	Size and fit full pressure suits

0004 ST0064 HAAMS DUTIES

1	E 141	Initiate TDY orders or amendments
2	H 234	Assign mission taskings for high altitude airdrop mission support (HAAMS) observers
3	H 235	Brief aircraft commanders concerning disposition of flight reactors
4	H 236	Brief aircrews and parachutists concerning high altitude hazards
5	H 237	Coordinate HAAMS mission requirements with appropriate agencies
6	H 238	Identify missions requiring HAAMS observers
7	H 239	Install HAAMS oxygen systems in aircraft
8	H 240	Load or unload HAAMS oxygen systems in aircraft
9	H 241	Monitor exposure times above 10,000 feet
10	H 242	Monitor prebreathing times below 10,000 feet
11	H 243	Observe HAAMS and aircrew parachutists
12	H 244	Unload HAAMS oxygen systems from aircraft

0005 ST0065 AFSC 4M0X1 TRAINING

1	A 28	Schedule student training requirements
2	B 33	Coordinate class scheduling with affected organizations
3	D 88	Administer or score training tests

4 D 91 Brief organizational personnel concerning training programs or matters
5 D 93 Conduct instructor in-house training
6 D 95 Conduct resident course classroom training
7 D 96 Conduct training conferences or briefings
8 D 97 Construct or develop training materials, aids, or devices
9 D 99 Critique student test results with students
10 D 100 Design student training literature
11 D 101 Determine OJT upgrade or resident course training requirements
12 D 102 Determine student training requirements
13 D 103 Determine student training schedules
14 D 108 Develop or draft lesson plans
15 D 110 Establish or maintain study reference files
16 D 111 Evaluate effectiveness of training programs
17 D 112 Evaluate effectiveness of training, such as career knowledge upgrade, job proficiency upgrade, or qualification training
18 D 113 Evaluate or inspect training materials, aids, or devices for operation or suitability
19 D 117 Evaluate training requirements for training instructors
20 D 118 Maintain training instructor folders
21 D 121 Procure training aids, devices, space, or equipment
22 D 122 Review student training literature

0006 ST0059 ORGANIZATIONAL/SUPERVISORY DUTIES

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1 A 1 Assign personnel to duty positions
2 A 2 Assign sponsors for incoming personnel
3 A 3 Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies
4 A 5 Determine or establish work priorities
5 A 6 Develop cost-reduction programs
6 A 7 Develop inputs to mobility, contingency, disaster preparedness, unit emergency, or alert plans
7 A 8 Develop organizational or functional charts
8 A 9 Develop self-inspection program checklists
9 A 10 Develop work procedures
10 A 11 Draft budget requirements
11 A 12 Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)
12 A 13 Establish performance standards for subordinates

13	A	14	Establish procedures for accountability of equipment, tools, or supplies
14	A	15	Establish work methods, controls, or inspection procedures
15	A	16	Establish work schedules
16	A	18	Plan equipment or facility maintenance requirements
17	A	19	Plan equipment replacement programs
18	A	20	Plan layouts of facilities
19	A	22	Plan or schedule work assignments or priorities
20	A	23	Plan safety or security programs
21	A	24	Plan self-inspection programs
22	A	25	Prepare agenda for meetings, such as staff meetings, conferences, or workshops
23	A	26	Review drafts of regulations, manuals, or other directives
24	A	27	Schedule personnel for temporary duty (TDY) assignments, leaves, or passes
25	A	29	Write job or position descriptions
26	B	31	Conduct staff meetings or briefings
27	B	32	Conduct supervisory orientations of newly assigned personnel
28	B	34	Coordinate physiological questions or problems with affected organizations
29	B	35	Coordinate temporary equipment loans with affected agencies
30	B	36	Counsel personnel on personal or military-related matters
31	B	37	Direct development or maintenance of status indicators, such as boards, graphs, or charts
32	B	38	Direct equipment maintenance or utilization
33	B	39	Direct recommendations for policy changes in logistics requirements, such as personnel, equipment, space, or supplies
34	B	40	Implement cost-reduction programs
35	B	41	Implement safety or security programs
36	B	42	Implement self-inspection programs
37	B	43	Implement suggestion programs
38	B	44	Implement work methods or inspection procedures
39	B	45	Initiate actions required due to substandard performance of personnel
40	B	46	Initiate personnel action requests, such as AF Forms 2095 (Assignment/Personnel Action)
41	B	47	Initiate requests for personnel replacements
42	B	48	Interpret policies, directives, or procedures for subordinates
43	B	49	Supervise Aerospace Physiology Apprentices (AFSC 4M031)
44	B	50	Supervise Aerospace Physiology Journeymen (AFSC 4M051)
45	B	51	Supervise Aerospace Physiology Craftsmen (AFSC 4M071)

46	C	55	Analyze maintenance or inspection reports
47	C	56	Analyze workload requirements
48	C	58	Conduct performance feedback worksheet (PFW) evaluation sessions
49	C	59	Conduct self-inspections
50	C	63	Evaluate budget requirements
51	C	65	Evaluate findings of inspection reports
52	C	66	Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) Program standards
53	C	67	Evaluate job or position descriptions
54	C	68	Evaluate layouts of facilities
55	C	69	Evaluate logistics requirements, such as personnel, equipment, space, tools, or supplies
56	C	70	Evaluate maintenance of equipment, tools, supplies, or workspace
57	C	71	Evaluate mobility, contingency, disaster preparedness, unit emergency, or alert plans
58	C	73	Evaluate personnel for compliance with performance standards
59	C	74	Evaluate personnel for promotion, demotion, reclassification, or special awards
60	C	75	Evaluate procedures for storage, inventory, or inspection of property items
61	C	76	Evaluate safety or security programs
62	C	77	Evaluate suggestions
63	C	78	Evaluate work schedules
64	C	80	Indorse enlisted performance reports (EPRs)
65	C	81	Inspect personnel for compliance with military standards
66	C	82	Perform safety inspections of facilities or equipment
67	C	84	Write EPRs
68	C	85	Write recommendations for awards and decorations
69	C	86	Write replies to inspection reports
70	C	87	Write staff studies, surveys, or special reports, other than training reports
71	D	90	Assign on-the-job training (OJT) trainers
72	D	94	Conduct OJT upgrade training
73	D	98	Counsel trainees on training progress
74	D	114	Evaluate personnel for training needs
75	D	115	Evaluate progress of trainees
76	D	116	Evaluate training methods or techniques

0007 ST0086 ADMINISTRATIVE DUTIES

1 A 4 Determine or establish publications requirements
2 E 129 Compile information for records, reports, or logs
3 E 135 Distribute aerospace physiology records or reports
4 E 140 Initiate requests for hazardous duty orders
5 E 144 Maintain administrative files
6 E 152 Maintain publication libraries or files
7 E 156 Maintain stock levels of blank forms
8 E 171 Write minutes of meetings, briefings, or conferences

0008 ST0087 PRESSURE SUIT INSTRUCTION

1 F 183 Brief water survival procedures during which pressure suit assemblies are worn
2 F 191 Conduct classroom instructions concerning pressure suit principles
3 F 200 Debrief pressure suit performance following chamber flights
4 F 203 Evaluate water survival performances of students wearing pressure suit assemblies

0009 ST0072 GENERAL EQUIPMENT MAINTENANCE

1 E 127 Annotate inspection or maintenance forms
2 E 128 Annotate records on status or inspections of equipment
3 E 146 Maintain documentation on items requiring periodic inspections
4 E 147 Maintain equipment status indicators, such as boards, graphs, charts, or computerized programs
5 E 151 Maintain precision measurement equipment (PME) calibration schedules
6 E 154 Maintain records on status or inspections of equipment
7 E 165 Solder wiring
8 G 210 Perform daily inspections of hypobaric chamber assemblies
9 G 211 Perform general maintenance on hypobaric chambers
10 G 212 Perform general maintenance on vacuum pumps
11 G 213 Perform oxygen flow checks of A-14 pressure-demand oxygen regulators

12	G 214	Perform oxygen flow checks of narrow panel pressure-demand oxygen regulators
13	G 215	Perform periodic inspections of hypobaric chamber assemblies
14	G 216	Perform special inspections of hypobaric chamber assemblies
15	G 218	Remove or replace high-pressure oxygen regulators
16	G 219	Remove or replace hypobaric chamber console oxygen equipment items
17	G 220	Remove or replace hypobaric chamber intercommunications system components
18	G 221	Remove or replace hypobaric chamber oxygen plumbing, such as tubing or fittings
19	G 222	Remove or replace operator panel instruments
20	J 268	Assemble life support equipment, such as oxygen masks
21	J 271	Construct life support equipment, other than custom-fitted oxygen masks
22	J 274	Inspect pressure-demand oxygen components
23	J 275	Perform periodic inspections of oxygen masks
24	J 276	Purge chamber portable oxygen assemblies
25	J 277	Recharge chamber portable oxygen assemblies
26	J 278	Remove or replace flight helmet intercommunications systems components for chamber students
27	J 279	Remove or replace oxygen mask components for chamber students
28	J 280	Schedule inspections or maintenance of life support equipment, other than pressure suit assemblies
29	J 281	Store oxygen equipment

0010 ST0089 HYPERBARIC CHAMBER OPERATIONS

1	F 198	Conduct hyperbaric chamber team training
2	I 248	Load or remove patients in hyperbaric chambers
3	I 261	Serve as chamber operator during hyperbaric chamber dives
4	I 262	Serve as crew chief and lock operator during hyperbaric chamber dives
5	I 263	Serve as inside observer during hyperbaric chamber dives
6	I 264	Serve as lock operator during hyperbaric chamber dives
7	I 265	Serve as recorder during hyperbaric chamber dives
8	I 266	Serve as timekeeper during hyperbaric chamber dives

0011 ST0026 RESEARCH CHAMBER MAINTENANCE

1 E 160 Recruit volunteers for research protocols
2 E 162 Review research subject records
3 M 373 Connect or disconnect centrifuges to personal equipment
4 M 374 Connect or disconnect subjects to biomedical instrumentations
5 M 375 Design centrifuge seat configurations
6 M 377 Install gas systems on centrifuges
7 M 382 Perform daily inspections of centrifuges
8 M 386 Perform daily inspections of refrigeration systems
9 M 388 Perform periodic inspections of centrifuges
10 M 392 Perform periodic inspections of refrigeration systems
11 M 395 Perform prerun or postrun inspections of centrifuges
12 M 396 Perform special inspections of centrifuges
13 M 400 Perform weekly inspections of centrifuges and related equipment
14 M 401 Perform 200-hour inspections of centrifuges
15 M 402 Perform 500-hour inspections of centrifuges
16 M 411 Serve as crew chief during centrifuge operations

0012 ST0093 PARACHUTE/EJECTION EQUIPMENT MAINTENANCE

1 L 341 Perform daily inspections of air egress procedural trainers
2 L 342 Perform daily inspections of ground egress procedural trainers
3 L 343 Perform daily inspections of live-fire ejection seat trainers
4 L 345 Perform daily inspections of parachute familiarization training equipment
5 L 346 Perform daily inspections of parasail communications equipment
6 L 348 Perform field-level maintenance on parachute familiarization training equipment
7 L 349 Perform field-level maintenance on parasail equipment
8 L 350 Perform general maintenance on live-fire ejection seat trainers
9 L 351 Perform operator maintenance on parasail communications equipment
10 L 352 Perform operator maintenance on parasail tow vehicles, such as monitor fluid levels

11 L 353 Perform periodic inspections of live-fire ejection seat trainers
12 L 355 Perform periodic inspections of parachute familiarization training equipment
13 L 357 Perform special inspections of live-fire ejection seat trainers
14 L 359 Remove or replace air egress procedural trainer components
15 L 360 Remove or replace cockpit trainer components
16 L 361 Remove or replace ground egress procedural trainer components
17 L 362 Remove or replace spatial disorientation trainer components, such as projector bulbs
18 L 369 Splice tow ropes used in parachute familiarization training
19 L 370 Visually inspect swing landing trainers

0013 ST0105 EGRESS INSTRUCTION

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1 F 172 Brief aerospace physiology subjects, such as hypoxia or sensory illusions
2 F 175 Brief ground egress escape procedures
3 F 177 Brief in-flight egress procedures
4 F 182 Brief use of spatial disorientation trainers
5 F 186 Conduct classroom instructions concerning crash survival
6 F 187 Conduct classroom instructions concerning ground egress escape procedures
7 F 188 Conduct classroom instructions concerning in-flight egress escape procedures
8 F 190 Conduct classroom instructions concerning parachuting principles and procedures
9 L 339 Operate night vision trainers
10 L 340 Operate spatial disorientation trainers

0014 ST0124 MANAGERIAL DUTIES

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1 A 17 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting
2 A 21 Plan or prepare briefings
3 D 119 Participate in training conferences or briefings

4 D 120 Plan or schedule training
5 D 123 Schedule students for aerospace physiology training classes
6 E 163 Review student critiques

0015 ST0144 MISCELLANEOUS MAINTENANCE

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1 K 292 Isolate aircraft communication cable malfunctions
2 K 309 Perform periodic inspections of LOX storage carts
3 K 310 Perform periodic inspections of nitrogen carts
4 K 321 Remove or replace defective pins in aircraft communications cables

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0016 ST0164 RESEARCH CHAMBER CREW DUTIES

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1 M 410 Serve as chamber operator during research chamber flights
2 M 412 Serve as crew chief during research chamber flights
3 M 413 Serve as inside observer during research chamber flights
4 M 414 Serve as lock operator during research chamber flights
5 M 416 Serve as outside observer during research chamber flights
6 M 418 Serve as recorder during research chamber flights
7 M 421 Size and fit research subjects with oxygen equipment

0017 ST0171 SPECIAL HYPERBARIC CHAMBER MAINTENANCE

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1 I 252 Perform periodic inspections of high-pressure compressors
2 I 254 Perform special inspections of high-pressure compressors
3 I 255 Perform special inspections of hyperbaric chamber assemblies
4 I 257 Perform 100-hour inspections of high-pressure compressors
5 I 258 Perform 200-hour inspections of high-pressure compressors
6 I 259 Remove or replace hyperbaric chamber intercommunications system components

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0018 ST0179 ROUTINE HYPERBARIC CHAMBER MAINTENANCE

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1 I 245 Charge compressed-air flasks
2 I 246 Clean hyperbaric chambers
3 I 249 Perform daily inspections of hyperbaric chamber assemblies
4 I 250 Perform daily inspections of low-pressure compressors
5 I 251 Perform general maintenance on hyperbaric chamber assemblies
6 I 253 Perform periodic inspections of hyperbaric chamber assemblies
7 I 267 Take periodic samples of air in compressed-air flasks

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0019 ST0187 NIGHT VISION/SPATIAL DISORIENTATION EQUIPMENT MAINTENANCE

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1 L 344 Perform daily inspections of night vision trainers
2 L 347 Perform daily inspections of spatial disorientation trainers
3 L 354 Perform periodic inspections of night vision trainers
4 L 356 Perform periodic inspections of spatial disorientation trainers
5 L 358 Perform special inspections of night vision trainers

0020 ST0214 AEROSPACE PHYSIOLOGY CLASSROOM INSTRUCTION

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1 F 173 Brief chamber flight preflight or postflight procedures
2 F 176 Brief hypobaric chamber flight preflight oxygen equipment inspection procedures
3 F 180 Brief use of emergency and portable oxygen systems during hypobaric chamber flights
4 F 181 Brief use of personal protective equipment
5 F 185 Conduct classroom instructions concerning aircraft pressurization principles and problems
6 F 189 Conduct classroom instructions concerning night vision principles and problems
7 F 194 Conduct classroom instructions concerning types of oxygen storage systems
8 F 195 Conduct classroom instructions concerning use of continuous-flow passenger oxygen systems

9 F 196 Conduct classroom instructions concerning use of oxygen masks
10 F 197 Conduct classroom instructions concerning use of oxygen regulators
11 F 205 Instruct treatment procedures for decompression sickness
12 F 206 Instruct treatment procedures for hyperventilation
13 F 207 Instruct treatment procedures for hypoxia
14 G 226 Serve as lecturer observer during hypobaric chamber flights, other than research flights

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0021 ST0228 IN-FLIGHT MONITORING EQUIPMENT

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1 M 371 Calibrate analytical devices, such as flowmeters or recording equipment
2 M 376 Fit crewmembers with in-flight monitoring equipment
3 M 380 Operate in-flight monitoring equipment
4 M 403 Record experimental data

0022 ST0225 CENTRIFUGE CREW DUTIES

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1 M 409 Serve as central observer during centrifuge operations
2 M 415 Serve as operator during centrifuge operations
3 M 417 Serve as recorder during centrifuge operations
4 M 419 Set centrifuge seat configurations

0023 ST0249 HYPOBARIC CHAMBER CREW DUTIES

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1 D 92 Clean aerospace physiology equipment, training aids, and devices
2 F 178 Brief rapid decompression during chamber flights
3 G 208 Connect or disconnect high-pressure oxygen cylinders
4 G 223 Serve as chamber operator during hypobaric chamber flights, other than research flights
5 G 224 Serve as crew chief during hypobaric chamber flights, other than research flights
6 G 225 Serve as inside observer during hypobaric chamber flights, other than research flights
7 G 227 Serve as lock operator during hypobaric chamber flights, other than research flights

8	G 228	Serve as recorder during hypobaric chamber flights, other than research flights
9	G 229	Store high-pressure oxygen cylinders
10	G 230	Treat chamber reactors for claustrophobia or apprehension
11	G 231	Treat chamber reactors for hyperventilation
12	G 232	Treat chamber reactors for hypoxia
13	J 269	Clean flight helmets of chamber students
14	J 272	Fit chamber students or patients with oxygen hoods or masks
15	J 273	Fit chamber students with flight helmets

0024 Tasks not referenced

1	B 30	Annotate timesheets for civilian employees
2	B 52	Supervise Aerospace Physiology Superintendents (AFSC 4M091)
3	B 53	Supervise civilians
4	B 54	Supervise military personnel with AFSCs other than AFSC 4M0X1
5	C 57	Complete USAF Graduate Evaluation Program forms or questionnaires
6	C 60	Conduct staff assistance visits (SAVs)
7	C 61	Develop USAF Graduate Evaluation Program forms or questionnaires
8	C 62	Evaluate accident or incident reports
9	C 64	Evaluate equipment development or modification data
10	C 72	Evaluate modified or prototype equipment
11	C 79	Indorse civilian performance appraisals
12	C 83	Write civilian performance appraisals
13	D 89	Annotate student withdrawal or entry forms
14	D 104	Determine training requirements, other than OJT upgrade, resident course, or student training requirements
15	D 105	Develop career development courses (CDCs)
16	D 106	Develop equipment training programs
17	D 107	Develop formal course curricula, plans of instructions (POIs), or specialty training standards (STSs)
18	D 109	Draft command standard training packages
19	D 124	Write job qualification standards (JQSs)
20	D 125	Write test questions
21	D 126	Write training reports
22	E 130	Complete accident or incident report forms
23	E 131	Conduct tours of aerospace physiology facilities
24	E 136	Draft or write report of surveys
25	E 149	Maintain mobility items
26	E 153	Maintain records on centrifuge or chamber research subjects

27	E 155	Maintain security forms on safe, containers, or for rooms
28	E 157	Participate in aircraft mishap investigations
29	E 158	Participate in aircraft physiological incident investigations
30	F 202	Evaluate water survival performances of students not wearing pressure suit assemblies
31	G 209	Escort students to flight surgeon's office following adverse chamber reactions
32	G 217	Remove or replace batteries in hypobaric chamber emergency systems
33	G 233	Treat chamber reactors for mechanical effects of pressure change, such as decompression sickness
34	I 247	Complete biannual inspections of high-pressure flasks
35	I 256	Perform weekly inspections of low-pressure compressors
36	I 260	Remove or replace hyperbaric chamber oxygen equipment items
37	J 270	Construct custom-fitted oxygen masks
38	K 319	Perform preflight physical examinations
39	K 330	Supervise donning and integration tests of occupied full pressure suits
40	K 331	Test and evaluate new or proposed pressure suit assemblies
41	M 372	Calibrate automatic controllers on research chambers
42	M 378	Mix and analyze breathing gases
43	M 379	Operate analytical devices in hypobaric chambers
44	M 381	Perform annual inspections of chamber temperature heating or refrigeration systems
45	M 383	Perform daily inspections of human experimental hyperbaric or hypobaric chambers
46	M 384	Perform daily inspections of hypobaric chamber fire suppression systems
47	M 385	Perform daily inspections of portable small animal hyperbaric or hypobaric chambers
48	M 387	Perform daily inspections of vacuum pump systems
49	M 389	Perform periodic inspections of human experimental hyperbaric or hypobaric chambers
50	M 390	Perform periodic inspections of hypobaric chamber fire suppression systems
51	M 391	Perform periodic inspections of portable small animal hyperbaric or hypobaric chambers
52	M 393	Perform periodic inspections of vacuum pump systems
53	M 394	Perform plumbing modifications to sealed environmental chambers
54	M 397	Perform special inspections of hyperbaric chamber fire suppression systems
55	M 398	Perform special inspections of hypobaric chamber fire suppression systems

56	M 399	Perform special inspections of portable small animal hyperbaric or hypobaric chambers
57	M 404	Remove or install analytical devices, such as mass spectrometers, on low-pressure chambers
58	M 405	Remove or install automatic controllers on research chambers
59	M 406	Remove or install gas sampling system components
60	M 407	Remove or install in-flight monitoring equipment from aircraft
61	M 408	Remove or install treadmills in hypobaric chambers
62	M 420	Size and fit antigravity protective equipment
63	M 422	Test and evaluate aeromedical evacuation equipment, such as respirators or incubators
64	M 423	Test oxygen masks, pressure suits, or chemical defense gear for inboard leakages